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The use of the online tutorial and assessment system, MathXL, in teaching of Algebra I

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THE USE OF THE ONLINE TUTORIAL AND ASSESSMENT SYSTEM, MATHXL, IN TEACHING OF ALGEBRA I

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ABSTRACT

The integration of web based learning tools into the teaching of mathematics holds much promise for engaging middle and high school students.

The purpose of this thesis is to report about my experiences regarding the effectiveness of using an online homework, tutorial and assessment system as part of two of the six Algebra I math classes I taught in the 2008-2009 school year at Sherwood Middle Academic Magnet School in East Baton Rouge Parish. Comparing the two sets of classes I found that such online systems offer many potential advantages to educators, such as the ability to provide instantaneous feedback, as well as a great deal of tutorial assistance on each and every homework problem assigned. Other possible advantages include increasing student motivation to succeed, offering many students the opportunity to develop content mastery, and allowing the educator more time to teach rather than grade homework, quizzes and test. With the great wealth of online resources available, in this thesis project we decided to consider the MathXL online system by Pearson Education that is used by many major educational institutions including Louisiana State University in their College Algebra and Trigonometry classes. A major piece of the thesis project is devoted to the development of a complete Algebra I MathXL online course environment and its integration with traditional instruction in the middle school setting, along with a discussion of the implementation and concluding beliefs after testing the program on one calendar school year.

CHAPTER 1 EDUCATIONAL VISION

1.1 Prologue

To allow the reader to put this thesis project in the proper prospective, I feel that it is important that I share a bit about myself and my beliefs as a veteran teacher and a life long learner. Thus, Chapter 1 will be devoted to sharing my personal background, along with my teaching history, goals, and beliefs. In Chapter 2, I will share what inspired me to explore the effects and outcomes of adding a MathXL course environment in my middle school Algebra I classroom. I will give an insight as to what MathXL is, why I chose MathXL, as well as the coupling of MathXL with the traditional methods of teaching. In the latter part of this chapter, I will discuss my experience while developing and implementing this program, concluding with pre/post test data. In Chapter 3, I will discuss some important factors to consider and be aware of when preparing to implement the MathXL system. I will also list some steps to follow and reminders to have handy when moving through the actual process. Finally, in Chapter 4, I will reflect on my experiences, lessons learned, and will give an outlook on my future plans concerning MathXL and the use of web based learning environment in middle school mathematics classes.

This thesis comes with extensive appendices where I provide essential materials collected and produced as part of the thesis project. Appendix A gives an overview of the textbooks available that come with the extensive MathXL support system today. However it is important to be aware that Pearson Education continuously improves their support system. For example, eight new features for instructors will be implemented in June of 2009. These features will allow the instructor to further customize enrollment, assign media learning aids, give partial credit for unsimplified algebraic and numeric answers, edit, add, or remove text in publisher-provided

questions, customize the study plan, change the "other" category in the gradebook to anything they wish. Most importantly, while I was restricted to adapt to a specific book for my purposes, from June 2009 on, every instructor has unlimited MathXL access to all books by Pearson Education, opening up a wealth of questions to choose from. In Appendix B, I collect all MathXL assignment results for the test group and comparative test results of the control and test group during the 2008-2009 year. In Appendix C, I provide all MathXL assignments and quizzes developed and benchmark connections.

1.2 Background

My name is Darlene N. Ford. I am a native of Baton Rouge, Louisiana and a product of the East Baton Rouge Parish public school system. As I reflect on my life and career, I ask the question, “How did I manage to become the person I am today and a teacher, no less?” What was it that made me want to be a teacher? Although many factors influenced my choice of career, I believe that the personal challenges and experiences I faced as a child had the greatest influence on my decision. The old adage that what doesn’t kill you makes you stronger is quite fitting to describe my early years.

I was the fifth child in a family that in retrospect seemed ill prepared for my arrival. As I entered first grade, I was excited until I realized that I was expected to read and write. As I struggled at this very young age, I began to believe that there was something wrong with me. Was I not as smart as the other students? Why was learning hard for me? During those early years, I accepted that, for me, survival was the key. Though academic excellence was not my strong point, I was exposed to teachers who demonstrated and encouraged a “never give up” attitude. They inspired me to do the best that I could with the abilities that I had.

When I entered seventh grade, I was given the opportunity to participate in after-school activities. I became a member of the school's gymnastics team, even though the skills needed for this sport did not come easily to me. Through hard work and commitment, as well as the support and encouragement of my teachers and coaches, I slowly began to develop my talents in this area. As my skills continued to grow, so did my confidence. As my confidence grew, I began to think that I might have possibilities. Maybe I could teach and coach others to work with their abilities, just as I had been helped. Suddenly, I realized that I wanted to give a part of me that could impact someone for a lifetime; I wanted to become a teacher.

There were still times when I doubted myself; that "least likely to succeed" label seemed to stay one step ahead of me. I began volunteering at the local YMCA, assisting in teaching gymnastics and swimming. As I look back, I believe that helping others, as well as seeing a look of success on the faces that I worked with, gave me a feeling of success. The self-discipline that I developed in gymnastics reaffirmed my "never give up" attitude and carried over into my college education. I was accepted into Louisiana State University, although the College of Education had reservations when accepting me into their program. Once again, academics were an issue. At this point, I was determined to get a degree in education. I could be a positive factor for others that may struggle academically. What this meant was that I could use my knowledge, prior experiences, and my patience to help others to have a positive educational experience. I now believe that I have done just that. For sixteen years, I taught health and physical education. It was my love and my life. It was a great opportunity to reach others. In 1994, due to health issues, I was faced with the decision of giving up my teaching career. To avoid giving up the joy of teaching, I began teaching Mathematics to 6th graders and, by 1996; I received my certification in Secondary Mathematics. I am now teaching 7th and 8th grade students Algebra I at Sherwood

Middle Academic Magnet School, a public school of 737 students in the urban East Baton Rouge Parish School System serving over 46,000 students. Sherwood Middle's School Population is comprised of approximately 3% Hispanic, 9% Asian, 30% White, 58% Black or African American.

Sherwood Middle Academic Magnet School is designed for the serious student. Our students will be provided with opportunities to take challenging classes for high school credit. These classes will include: **French and Spanish, Algebra I, Geometry and Physical Science**. The students will achieve a deeper meaning to their learning by taking enrichment classes to enhance optimal learning.

Our commitment is to afford a variety of course offerings that will increase intellectual and personal growth. Students will learn through the integration of research, writing, and technology.

Sherwood Middle Academic Magnet

Sherwood Middle Academic Magnet is a 4 Star school!

Figure 1.1. Screen excerpt from the Sherwood Middle Academic Magnet web site (sherwood.ebrschools.org)

My sincere desire to work with students and my professional peers continue to strengthen, providing me the opportunity to give genuinely in return to society. While I spend most of my early mornings and afternoons volunteering to tutor students who are struggling in math, I still devote much of my time to my family and daily reflections. As I reflect on my contributions and accomplishments in education, I must take a long hard look at myself. I believe my strongest contributions are demonstrating a genuine concern and a deep interest in my students' academic achievement. Because my students know that I really do believe every student is capable of success and there is good in everyone, they trust me. If I can help students believe in themselves, their accomplishments will follow and hopefully they too will pass it on. I serve in my teaching position actively and with a positive outlook on each task or project with which I am faced. I view no task as too great or too small when it has a slight chance of positively influencing the growth of a child. Much to my amazement, my teaching goals and philosophy have not changed over the years.

1.3 Teaching Goals and Philosophy

All areas of education play a major role in the curricula of all students. Education should act upon the physical, mental, social, and emotional strengths of each participant. The student and his individual needs should always be the most important focal point of any educational program.

As a teacher, I have always found that enthusiasm and a positive manner helped me become a better teacher. I have learned to stress self-discipline and mutual respect as well as subject area content. In particular, I have also discovered that the development of self-discipline is one of life's greatest achievements. This discipline coupled with self-confidence makes it possible to understand that we are all human beings and while being willing to try out new things, we as individuals know that making mistakes is a cleverly disguised learning opportunity. When I began my teaching career, my foremost goal was to create in students a desire to learn. This goal, coupled with the development of a positive learning outlook in young people, is one that cannot be stressed too strongly. I feel that we, as teachers, make a lasting impression on our students. We can make a huge impact on their lives, and we help them set individualized learning goals. Only through the cooperation of teachers, parents, and students can these goals be achieved.

As individuals enter my classroom, they are welcomed and provided with vigorous plans for optimal learning. A supportive and flexible environment allows for a variety of learning experiences in my classroom. A well-disciplined and positive climate fosters self-discipline, self-confidence and student responsibility. The future of our country rests with the young people we teach today. To teach mathematics to students is exemplary, but to simply expose them to book knowledge is a grave injustice. Instilling honest values in students by which they guide their

future lives, is a far greater service. Honesty, integrity, self motivation, and respect for others are values I teach my students everyday. I feel that by modeling these values in my daily life, I can stand as a role model for the students I teach.

“Teaching is a profession that teaches all other professions.” (Author unknown) As a classroom teacher, I have used this opportunity to share with brand new educators. As I see it, we learn as much from others as we, in turn, teach them. It has been a privilege and a pleasure to work with new teachers and interns in order to fuse their new ideas with my tried and true ideas and all that I have learned in the past twenty-eight years of practical classroom experience. I can truly say, each and every mentoring experience has been rich, rewarding, with a deeper understandings and a love for teaching.

Teaching mathematics is an art. Over the years, I have learned that it is vital that both teacher and student possess an open mind and confidence to be successful in mathematics. Many students approach mathematics with fear and a low level of confidence. I think their fear stem from a lack of confidence in the basic skills, making math even harder for them. With this thought in mind, many of us live what we feel and believe. As an educator, it is necessary that I have a sense of my students’ attitudes toward math as well as their foundation of skills in mathematics.

CHAPTER 2 MATHXL

2.1 Introduction

During the summers of 2007 and 2008, as a part of the 'Master of Natural Sciences' program at Louisiana State University, I was introduced to and completed three mathematics courses that use an online tutorial and assessment system. This system, MathXL is a fully based program. Using this program, coupled with lectures is a requirement of all College Algebra and Trigonometry students at Louisiana State University and for all first year students in the Master of Natural Sciences program. Prior to working through problems and assessments online, students attend formal lectures that discuss the process and procedures needed to successfully complete assignments. Students are expected to spend a specific amount of time in a supervised environment while completing the work. For students in the Master of Natural Sciences program, similar requirements are also in place in the second year (summer) when Calculus is emphasized.

The opportunity to use MathXL had a great impact on my teaching and leaning approaches for the future. The more I worked with the MathXL system, the more I was convinced that having online access was another step in the right direction for reaching Algebra I students. With this idea in mind, my goal for the 2008-2009 school year was to:

- develop a MathXL based course for my own students, and
- document and explore the effects and outcomes of adding a MathXL course environment in a middle school Algebra I classroom

2.2 What Is the MathXL Tutorial and Assessment System?

MathXL is an innovative, and easy-to-use web-based homework, tutorial and assessment system that accompanies Pearson Education textbooks in mathematics and statistics. MathXL assigns homework, quizzes, and tests using algorithmically generated exercises. It provides immediate

feedback to the students, guided solutions, and access to a supplemental multimedia and tutorial exercise system.

2.3 Why the MathXL Tutorial and Assessment System?

MathXL engages students in active learning—it is modular, self-paced, accessible anywhere with web access, and adaptable to individual learning styles. Some students need to be guided step by step, others work well by looking at an example and reading the text, and some others work better when observing and hearing someone work through a problem. All of these learning styles are available at the push of a button. Its immediate feedback and tutorial assistance motivate students to do more homework, hence spending more time doing math and preparing for quizzes and tests. MathXL automatically grades online homework, quiz assignments, and tracks all student results. The instructor spends less time grading and more time teaching. By using MathXL to monitor students' results, a teacher can quickly assess how individual students -- or the class as a whole -- are progressing with specific topics.

This system is extremely dependable (it has never crashed since I started working with it) and it is easily customized to better meet student needs. Pearson Education, one of the world's largest publishers, offers a wealth of textbooks to customize specific MathXL courses. Pearson companies like Prentice Hall, Addison Wesley, Scott Foresman, and Longman have over 200 textbooks with MathXL links to choose from. This list (available in Appendix A) allowed me to select a textbook that would be best aligned with the text required by the state and parish curriculum. The textbook that I selected was *Beginning & Intermediate Algebra*, *third edition*, *by K. Elayn Martin-Gay*.

2.4 MathXL Coupled with Traditional Teaching Methods

Using multiple instructional approaches lends to assuring maximum success. In order to ensure success, I use traditional teaching methods that include the skills approach, conceptual approach, and problem solving approach. The prior knowledge and skill approach is necessary. Yet, the conceptual approach lends to foster the need for meaningfulness. When stating the term meaningfulness, I am referring to the "whys" of the concept. My objective for this approach is that each student will have a good understanding of the facts, rules, formulas and procedures, as well as be able to verbally express the "why" toward the specific concept. The third approach, problem solving, opens the door for the students to apply their own mathematical thinking and reasoning. This approach lends to mastery of the concept, along with allowing students to use multiple approaches to finding the solution for the same problem. Coupling MathXL with my traditional teaching methods results, at least for me, is an almost ideal blend. The MathXL system allows me, as the teacher, to maximize my instruction and allows my students to receive personalized and immediate feedback when working assignments online in school, at home, or wherever internet is accessible.

2.5 Development and Implementation of MathXL in Algebra I

The MathXL system allowed me to select a textbook that would best be aligned with the text required by the state and parish curriculum. It also allowed me to customize the assignments and quizzes. The assignment section not only had problems to access and work, but also gave opportunities to have available personalized resource sections (see Figure 2.1). Wow! The textbook that I selected was *Beginning & Intermediate Algebra third edition by K. Elayn Martin-Gay*. After choosing the appropriate text, matching each section of the Martin Gay text with the *McDougal Littell Algebra I (copyright 2005)* text was the next step.

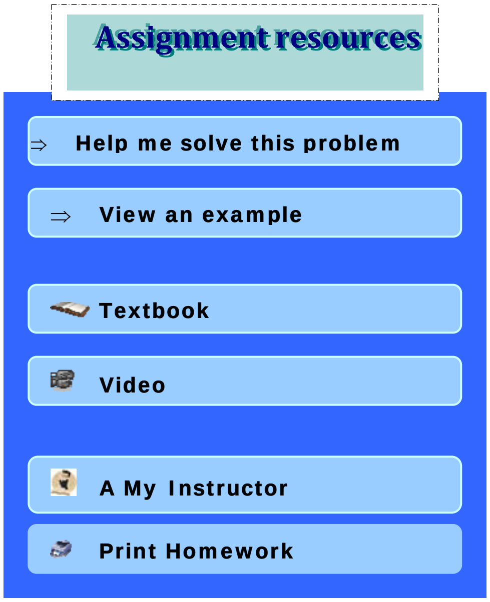

Figure 2.1 Resources available

The McDougal Littell text is the book adopted by the school system that I work in. A summary of this alignment is given in Appendix C. Once done, I began naming section topics and selecting questions appropriate for assignments. Then the decision would be made about quizzes for students. I chose to also create quizzes aligned with the assignments. I set the quizzes up in a manner that each student would be able to take the quiz up to ten times with no time limits on the length of each working session. In other words, a student could work on an assignment or a quiz an unlimited time just as long as the work was complete by the assigned deadline. Students would be allowed to work on the assigned material any place and anytime. All of this may sound "easy", but is in fact a significant amount of work since all problems chosen do have to be checked carefully and put in the proper places. A complete list of the assignments and quizzes as a part of this project is provided in Appendix C.

2.6 Objectives of Using MathXL in Algebra I at Sherwood Middle

Algebra I is a required key course in the mathematics curriculum. Traditionally, in Louisiana this course is taken by 9th graders followed by Geometry, Algebra II and (maybe) Advanced Mathematics in the senior year. For students to be able to take a Calculus course in high school, without having to "double up" on math in their sophomore or junior year, Algebra I should be taken in 7th or 8th grade, if at all possible. Presently, following the recommendation of the High School Redesign Commission, to help improve consistency and rigor of high school courses across the state, Louisiana is implementing an "end-of-course" exam for Algebra I. All

public school students, (including charters and labs) completing an Algebra I course must participate in this test. I am proud to report that my 7th and 8th grade Algebra I students at Sherwood Middle School consistently scored at the very top in comparison to their peers at other middle and high schools.

Table 2.1 End of course exam results

	End of Course Exam Results (% of students achieving designated level)					
	2007-2008			2008-2009		
Level	LA	EBR	Sherwood	LA	EBR	Sherwood
Excellent	10	11	63	tba	tba	62
Good	26	19	33	tba	tba	35
Fair	28	24	4	tba	tba	3
Needs Improvement	25	48	0	tba	tba	0

So, with over 95% of my students passing the statewide end-of-course exam with “excellent” or “good” and none failing, why would I try to use MathXL in my Algebra I class? The reason is provided in Table 2.1, in Louisiana and East Baton Rouge percentages. With only 30% of the Algebra I students passing the end-of-course exam with an excellent or good; it is obvious that there is much room for improvement in the delivery of Algebra I courses statewide. After being a classroom teacher for 29 years, I think that I have the experience necessary to assist others in becoming more effective in the teaching of their Algebra I classes. When I started to learn about MathXL, I became convinced that adding a web-based learning tool could be a powerful tool in addressing the shortcomings in many Algebra I classrooms across the state. So, I decided to create the (to my knowledge) first MathXL system that is specifically designed for use in learning Algebra I. However, before implementation at other schools, I had to make sure that the MathXL system did not do any harm (meaning that potentially only good can come out of it).

2.7 Test Group and Control Group

Choosing active participants for exploring the effect of MathXL on Algebra I students would mean that I would have a test group and a control group to be selected from the six classes of Algebra I that I teach at Sherwood Middle School. The selection of students to work with MathXL was the next task. I polled all of my 122 students as to whether they had internet access available at home. I had two of six classes that had 100% access available; so that determined the test group. To justify to my students who would be working with MathXL, I told them that they had been placed in an Honors Algebra I class. The test group consisted of 41 students. in my 1A and 4B classes. To maintain the same teaching setting and environment, I chose my control group to be the 1B and 4A classes having 41 students as well. The 1A and 1B classes were on a block schedule from 7:25AM to 9:00AM. The 4A and 4B classes were also on a block schedule from 1:00PM to 2:25PM. The remaining two classes, 3A and 3B followed the same leaning format as the control group, but their data was not included since the environment for these classes was somewhat different. Both of these classes had 45 minutes of class time, then a 20 minute lunch-time gap, and followed up with 25 minutes of additional class time.

The next task was to get licenses for each student that would be a participant in the test group and write a letter to the participants and their parents explaining the program. To support the pilot, Pearson Education donated the licenses that usually cost $15 per student per year. The letter given to each participant was as follows.

August 11, 2008

Dear Parents,

Sherwood Middle Academic Magnet is a college preparatory school, and we strive to prepare students appropriately for their experiences in high school and college. As some of you may already know, many high schools and colleges are beginning to use math programs that integrate online lessons with teacher-taught material and traditional paper textbooks. Statistics show that the use of these online programs is likely to increase student-learning outcomes and improve student success.

During this 2008-2009 school year, in Algebra I we will be piloting an online math program used at several high schools and at LSU. It is called **MathXL**. We will be using this program for some homework assignments and quizzes. The benefit of the online computer program is that it provides students with access to an unlimited number of practice problems. MathXL produces algorithmic iterations of the same exercise allowing students to practice until mastery is achieved. In addition, the program offers tutorials through interactive help, static guided examples, and videos. Of course, this will require some self-discipline on the part of the students to persist until they "get it" (another great skill to work on).

The MathXL program plug-ins has been installed on the computers in the library at school for students to use during their available time. In addition, it would be very beneficial to have the plug-ins installed on computers at home so that students have access to the program during the hours away from school. Your child has indicated that he/she has access to a computer at home (if this is not the case, just let me know). So, I am asking you to help your child register in this program at home with your supervision. This will require a computer with a Windows operating system, Internet Explorer, a MathXL access code*, and a valid email address. I have reviewed the registration process with your child, and I have attached an instruction sheet that can be used as a guide. After your child has registered in MathXL, he or she will need to run the MathXL Installation Wizard to install the MathXL plug-ins on the computer. This registration needs to be completed before Friday, August 15, 2008.

Once your child has registered in MathXL and set up a login and password, he or she will be able to access his account from any Windows-based computer with Internet Explorer as long as he runs the Installation Wizard on that computer to install the plug-ins.

Thank you for your help with this MathXL registration. We are very fortunate to have the opportunity to work with this exceptional math program that will increase learning and help prepare our students for success in college. Please send me an email if you have any concerns or questions at dford@ebrschools.org.

Thank you,
Darlene Ford

Figure 2.2 Letter to parents introducing MathXL

As students registered and installed the necessary programs on to their computers, I was available to assist them. Some students had no problems, but others encountered issues at home where computers needed updating. Knowing that I had no control over the students' home computers, I worked to resolve any issues that might hinder this test group from completing assignments. All students were given access to work in my classroom during designated class time, before school, and at break time during school. Once all students were set up for using

MathXL, I matched lessons and assignments to both the test group and control group. Lesson delivery for each group was the same. When assignments were given, if the MathXL assignment matched the assignment objective for the lesson, the test group would complete only the assigned material on the computer. If the match was questionable, then the test group would be required to also complete a given amount of paper pencil homework. As for quizzes, the test group was required to complete all MathXL and paper pencil quizzes. The control group took all paper pencil quizzes and was given supplemental quizzes on this excellent software program “Understanding Math” that is, unfortunately only available at school and can not be accessed by the students from home. The Understanding Math is a software program created by Rudy Neufeld that I use successfully in my classes since 2004. However, implementing “Understanding Math” requires a dedicated teacher, someone to pay for the site-license and a fair amount of professional development before a teacher can use it effectively. It is important to point out again that “Understanding Math” is not web-based and can not be accessed by the students from home. Please be reminded that the main purpose of the control group was to collect evidence that students in the MathXL test group do as well (and no worse) than the students in the control group who were using the “Understanding Math” software. Clearly, if they would do worse, then I would concentrate fully on promoting “Understanding Math” across our state.

Rudy Neufeld “Understanding Math About.” Our Story. 2008 http://neufeldmath.com/about.html

Understanding Math has 9 Programs for grades 4-10.
TOPICS CONTAIN:

- INTERACTIVE CONCEPT SECTIONS with graphic explanations
- INTERACTIVE EXAMPLES with step-by-step explanations
- PRACTICE QUESTIONS with interactions
- OFF-COMPUTER ACTIVITIES with lesson outlines/support sheets

Figure 2.3 Understanding Math

Over 20 years ago Rudy Neufeld began developing software with a philosophy that the understanding of mathematics is possible for all students. Developing mathematics concepts from the concrete to the pictorial to the abstract along with multiple representations makes mathematics accessible to everyone. His 30 years of experience as a mathematics teacher, department head and consultant helped him cultivate his vision of how software could be used to empower teachers and deepen the understanding of mathematics for students of all ability levels. His dedication to affect positive change in the instruction of mathematics has become our mission and is the foundation of everything we develop at Neufeld Learning Systems, Inc. The Understanding Math Series of programs and our Professional Development framework are the results of our commitment to his passion for making a difference in mathematics education. Today his vision is being realized in classrooms throughout the United States, Canada and Australia. Understanding brings success!

Figure 2.4 Understanding Math Story

Both, the control and test groups, took the Chapter SAT test created by *McDougal Littell Algebra I (copyright 2005)*, as well as unit assessments provided by East Baton Rouge Parish school system.

Upon assigning the first online homework assignments, the students were eager to fulfill the task. I too was eager to see if good intentions would be followed with the test group completing their assigned work. I would check daily to monitor the students' progress. I noticed that the majority of the students were right on target. For those that were not completing the assignments, I investigated. The problems that most of them had were computer issues. Once the issues were resolved and reality set in that each assignment was part of their grade, there was a minimal amount of work incomplete (documented in Appendix B). Because this was a pilot program and the students involved were middle school students, reminders of assignments were posted daily in the classroom and on my web page. When a new assignment was announced, the MathXL system e-mailed the students. As time went on, the control group and test group faced similar unforeseen and uncontrollable issues affecting the implementation of the program. First, nature took its toll. Hurricane Gustav had a major affect for all. The schools were closed for a week, no electricity, no internet. Assignments were adjusted to adapt to the circumstances. The key to getting back on track was for me to maintain planned requirements with extended due dates. Again, as the teacher, I had to

follow up with monitoring each student. Those students that would fall behind were individually counseled. I reminded all students that if an assignment deadline was coming to a close and an extension was needed, that they should always make me aware of it and I would do my best to accommodate them. In doing my best to accommodate every student, I had room to hold the students accountable for whatever the situation, if needed.

Table 2.2. Test group and control group demographics

Sherwood Middle Academic Magnet School Algebra I 2008-2009 7th and 8th grade student data		
	Test Group	Control Group
Total Number of Students	41	41
Ethnicity		
Asian or Pacific Islander	6	8
Black (not Hispanic)	14	16
White (not Hispanic)	21	16
Grade		
7th	11	14
8th	30	27
Gender		
Male	28	21
Female	13	20
Educational Programs		
Free or reduced lunch	13	22
Limited English	3	4

As time went on and all groups were well adjusted to the routine and expectations, I was able to look at the similarities and differences in the two groups. Both had 41 students and had very similarly balanced backgrounds in ethnicities, grade levels, gender, participants in the free and reduced lunch program and the number of students with limited English proficiencies. All in all, the control and test groups had very similar basic math abilities. All participants had me as their teacher, class instruction was given in the same environment, and times being taught were parallel.

The results of the Algebra I readiness placement test, that is required by the state for students prior to being placed in Algebra I gave an indication that the test group would start the project with a slight ability advantage. Six of the test group participant scored significantly higher than those in the control group (see section 2.8 below). Important to me though was to hope that the MathXL supplemental work would push these six students to grow even more.

Other differences began surfacing as the year progressed. While delivering the same lessons to both groups, I began to notice behavioral differences. The greatest behavioral difference that I observed was independence and dependence. When introducing a new skill, students in the test group approached the skill with a since of openness, while asking and answering questions. To my amazement, they demonstrated strong critical thinking skills, combined with greater confidence and independence. These students took responsibility and ownership when a new topic was being introduced, as well as, when given the lesson expectations. When the test group was given paper pencil assignments to complete, there was little hesitation approaching the tasks. I observed these students independently using resources available. The control group tended to be more reserved or unsure of themselves; this group would wait for my prompt to guide them through discussions. The control group was more likely to hold back in an open discussion and seemed less confident when working independently. Reminding students of the available resources and reference material to use was a somewhat normal routine for me. The control group demonstrated more dependence on me as the teacher.

2.8 Pre/Post Test Data

The information shared in this section is data collected on each test group and control group student prior to and upon completing Algebra I. The pretest score is data that was collected in the spring of 2008. This test measures mastery of skills prior to entering an Algebra I course. Specifically, a student must score a minimum of 70% on the 8th grade, Grade Level Expectation required by the state to enroll in Algebra I. Notice that in both groups, the pretest averages were below the state minimum requirement. The Board of Elementary and Secondary Education granted a waver allowing individual schools to be the deciding factor. The end-of-course exam data was collected in the spring of 2009. This test assesses the mastery of skill

expectations needed upon completion of Algebra I. These skill expectations are the 9th grade, Grade Level Expectation required by the state (see http://www.doe.state.la.us/lde/saa/2273.html). In Table 2.3 end-of –course exam achievement levels and scale scores are displayed. Excellent, good, and fair are considered passing while "needs improvement" means that a student must repeat the course.

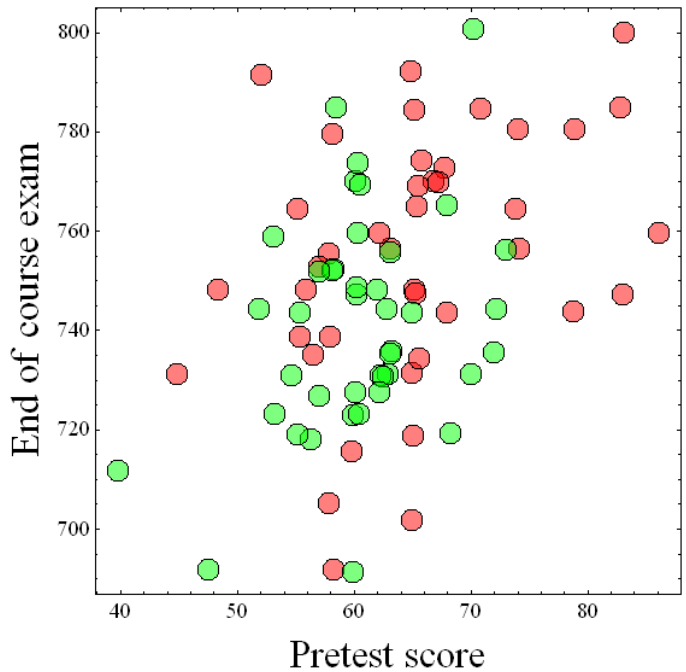

Figure 2.5. Individual student pre/post test data. Test group data for 41 students with scores in control range. Control group had 41 students.

Table 2.3 End-of –Course achievement levels and scale scores.

End-of-Course Tests
Achievement Levels and Scaled-Score Ranges

Algebra I

Achievement Level	Scaled-Score Ranges
Excellent	739-800
Good	700-738
Fair	668-699
Needs Improvement	600-667

It is also very important, while viewing this data to remember that the students involved in this program took the pretest as a 6th or 7th grade student and took the end of course exam while in the 7th or 8th grade.

The information that is shared in the Table 2.4 is the control and test group percent averages on the pretest and end of course exam. The scale score average is also included.

Table 2.4. Control group and Test group averages of Pre/Post Assessment

Sherwood Middle Academic Magnet School Test group and Control group averages of Pre/Post Assessment		
	Control Group	Test Group
Total Number of Students	41	41
Pretest 8th grade GLE's	60.1%	65.5%
Post End-of-course exam	741 = 92.6%	754 = 94.3%

The conclusions that we can confidently draw from there data and observations are as follows:

1. There is no evidence of any disadvantage for the test group. That is, the students using MathXL seemed to score at least as well as the students using "Understanding Math" software system. Since the students in the test group scored a phenomenal 94.3% average on the statewide end-of-course exam and the students in the control group scored an equally phenomenal 92.6%, there is no point in saying that one group did better than the other. However the fact that both groups of 7th and 8th graders outperformed most of the rest of the state by using a computer – based learning environment is an interesting and noteworthy fact.

2. There are some "hints" that the test curriculum might be advantageous. Throughout the project, the test group demonstrated strong critical thinking skills, along with a sense of confidence and independence. These students took responsibility and ownership for their learning. This behavior is not easily identified in a mathematics classroom, but as stated in my teaching goals and philosophy, I not only want to teach Algebra I, but I want to build on an individuals' confidence, independence, responsibility and ownership for their learning. I believe that the web-based supplemental access supported these goals significantly.

3. Further investigations are warranted. As a follow-up on this project, I will in-service other Algebra I teachers from Louisiana at Louisiana State University during the months of June and July 2009. Several schools through out the state will pilot MathXL Algebra I (including Avoyelles Public Charter, Baker, Catholic, Dunham, East St. John, Parkview Baptist, Pine,

Rapides, River Oaks, St. Josephs, Walker, West St John, and University). Under the direction of Phoebe Rouse, the Pre-Calculus Mathematics Coordinator at LSU, the Algebra I teachers at these schools will obtain records of students from the previous year and perform a baseline comparison. The MathXL Algebra I pilot program requires that the current course must have the same teacher, the same text, and the same presentation method. The use of the MathXL should be the only variable. Students in the 2009 - 2010 course must be comparable to students from the 2008 – 2009. During the program assessment teachers will compare

- the improvement from pre- to post-test scores of the previous year students without MathXL to the pre- to post-test scores of the MathXL students. Measurement will be based on use of standard pre/post tests that are already being administered;
- the pass/fail rates of the previous year students without MathXL to pass/fail rates of MathXL students.

CHAPTER 3 PLANNING AND PREPARING AN ONLINE COURSE

3.1 Planning for the Use of the MathXL Tutorial and Assessment System as a Part of Teaching Algebra I:

Figure 3.1 MathXL logo

When planning the implementation of MathXL into the Algebra I classroom, there is much to consider. First and foremost, the implementer must be committed for the long haul. I am very sincere in making this statement. One must be prepared, be firm, be open to change, be flexible, and display patience. All of this, clearly, is part of being a teacher. Preparedness is a priority. Getting access to copy or create a MathXL course is necessary. The teacher must be familiar with and well-adapted to the program to be used. Viewing and completing the course is necessary. The students will be depending on and trusting their instructor. For this all to happen in an organized way, participating in a MathXL professional development workshop before getting started is almost a necessity. Planning and preparation starts with assessing the needed and available tools. This includes determining if the school facility and the students have (or will have) internet access available for using MathXL. Determining the students' web access availability can be done through a survey when students are registering for the class. This is the best time for planning purposes, but that is not always an option. At public schools, student rosters are often distributed the day before students report to class, but additional students add, drop, and section changes occur later. Surveying the students during the first week of school is an option. If there are students who do not have internet access at home, then the teacher will have to help find a solution for them. If a small number of students are in this situation, one may print paper pencil copies of assignment and quizzes. A large number of students without internet access may warrant opening computer labs before and after school. However, if students are on a

block schedule and have individual computer access, this would provide time and opportunities for MathXL use. There are many solutions to the problem, but the teacher must be mindful of these issues. Once there is commitment from the teacher and access to the internet is secured, then it is time to get to work. Aligning the MathXL program and the local school system's text is next on the agenda. If the teacher is familiar with both, placing the MathXL assignments and quizzes into lessons the transition will be fairly smooth.

The last part of preparation is becoming familiar with the navigation tools:

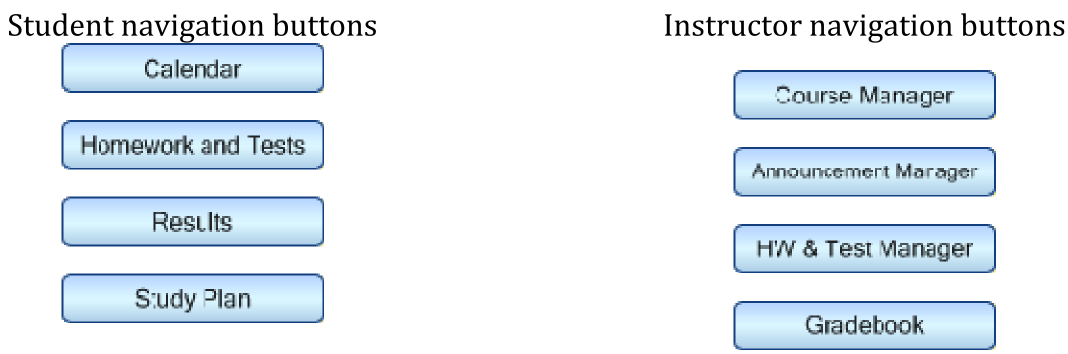

Figure 3.2 MathXL navigation menu

It is useful to create a welcome announcement. The following is a sample:

Figure 3.3 MathXL announcement icon

Obtaining licenses and creating class sections should be done when you get your class rosters. Licenses can be obtained through Pearson Education for a minimal fee of $15 per student per year. The licenses are emailed to you and you must print them. I printed duplicates so that I would be able to have a copy for the student and a copy for my records. Directions for students to enroll in the class are given on the sheet that the students receive. Students can be instructed to complete the enrollment process at home or it can be done as a whole class activity with your step-by-step guidance. If you choose the first option, it will allow some parent involvement, and will begin the process of independence. Notice, I said begin. Some students will have no trouble

Welcome to Algebra I

Greetings:

I would like to take this opportunity to welcome you and your parents to Algebra I. Algebra I is the foundation for all mathematics to be taken in the future. Algebra I-MathXL is for selected accelerated students that have a. strong math background and will work with more technology based home assignments and assessments. This course will also follow the guidelines required by the academic magnet programs which include: use of the Louisiana Algebra I Comprehensive Curriculum for Mathematics and the entire Algebra I McDougal Littell Math textbook. Technology will also be used throughout each unit and chapter covered in the textbook. The technology that will be available in the classroom is: MathXL – Algebra I; Understanding Math Plus programs by Neufeld Learning Systems, and TI-73 graphing calculators. With much to cover in two semesters, it is of utmost importance that we all give 100% to the learning process. It is required that you, the student, demonstrate mastery of skills on the middle school level as well. In order to fulfill the technology based home assignments and assessments, each student will need to have computer/internet access at home. If this poses a problem, please contact me as soon as possible by phone or email. Phone: 225-272-3090. Email: dford@ebrschools.org I am looking forward to working with you and your parents. If you have any questions or concerns, please feel free to contact me at 272-3090 or dford@ebrschools.org Thank you for making each day count in the coming year.

Your partner for education,

Ms. Ford

Figure 3.4 Sample announcement on MathXL

with enrollment, yet there will others needing assistance. The good thing is that if all students are assigned to register at home, then when students report back to class, problems can be resolved individually while others work independently. Fellow students can help each other as well with issues that arise.

During the first few weeks, students respond to the online experience like having a new toy. Be prepared that each student will respond to the program differently. Remind yourself of your first experience, positive or negative; there is an adjustment period for everyone. Be mindful of the ages of your students. This should help you gage your need for flexibility and patience. Structure and routines must be maintained for staying on track. A decision that will arise is when to open and assign homework and quizzes. Along with it comes the decision of how long the lessons will stay open. There must be deadlines for assignments. For teachers, it would be for grading purposes. Nevertheless, for all involved, it helps the individuals pace themselves when working.

Deadlines can always be altered for whole class or one individual. Remember, discipline varies from student to student. Opening or assigning too many sections can have overwhelming effects. When it all comes down to it, you the educator have the upper hand in making this decision. Will there be mistakes? Indeed, there will be mistakes, but again, this comes in eyes of the beholder. I use each of these experiences as just that. I use them as a learning opportunity in the moment and for the future.

3.2 Steps to Follow

In this section you will view a list of planning and implementing procedures along with some helpful reminders that are necessary for a successful online supplemental program.

Implementing your Online Supplemental Program

- Create a welcome announcement on the home page of your course
- Obtain class rosters and create class sections
- Obtaining licenses for all participants (For MathXL this is done by contacting a Pearson Education representative. The licenses are emailed to you.)
- Print the individual licenses.(I printed duplicates so that I would be able to have a copy for the student and a copy for my records. Directions for students to enroll in the class are given on the sheet that the students receive.)
- Instruct the students to complete the enrollment process. (This can be done at home or done as a whole class activity with your step-by-step guidance. If you choose the first option, it will allow some parent involvement, and will begin the process of independence.)

Figure 3.5 Steps for Planning an Online Supplemental Program

Planning for Implementing an Online Supplemental Program

- Get access to copy or create an online supplemental course.
- Become very familiar with and well adapted to the program you are planning to use.
- View and complete the course that you plan to use.
- Assess the needed and available tools.
- Determine if your school facility and the students that you will be teaching has or will have internet access available for using the online supplemental course
- Align the online supplemental course with your school systems textbook and curriculum
- Become well oriented with all of the navigation tools for the online program

Figure 3.6 Steps for Implementing your Online Supplemental Program

Reminders

- For students, this is a new toy.
- Each student will respond to the program differently.
- Reflect on your first experience. There is an adjustment period for everyone.
- Be mindful of the ages of your students.
- Be flexible and patient. Structure and routines must be maintained for staying on track.
- Prepare in advance for deciding when to open and assign homework and quizzes and how long the lessons will remain open.
- Determine deadlines for assignments one by one. (Remember deadlines can always be altered for whole class or one individual.)
- Opening or assigning too many sections can have overwhelming effects.
- Use each experience as a learning opportunity in the moment and for the future.

Figure 3.7 Reminders when Implementing your Online Supplemental Program

CHAPTER 4 REFLECTIONS

4.1 Looking Back

As I look back at the effectiveness of using online homework, tutorial and assessments as part of my Algebra I math class, I am confident that the students using MathXL were impacted positively. I believe that receiving immediate feedback, guided solutions, and access to supplemental multimedia and tutorial exercises at the click of a button when working assignments online, resulted in intent focus, more engagement learning, which in turn, lead to working more practice problems. Students remained involved in the learning and practicing process for extended amounts of time. The students working on the MathXL program had the option to view an example, look at the textbook pages, and view a video or, when everything else failed before asking the instructor, the student could choose a tutorial option, "help me solve this problem". With the tutorial option called "help me solve this problem", MathXL guided the student through the entire problem solving process. After completing the tutorial, the student was expected to work a similar problem in order to receive credit. Students had unlimited chances to get problems correct. The way the program is set up, MathXL students could email the instructor, with the exact problem that was in question. The instructor could respond immediately, or could let the individual know the problem would be addressed the next day. With all of the additional resource avenues available, these students demonstrated responsibility and ownership maximizing the learning experience in the classroom.

With the confidence gained in the MathXL system during the 2008-2009 pilot, all Algebra I students at Sherwood Middle will now use MathXL for the 2009 – 2010 school year. Sherwood Middle will participate in the Pearson College Readiness Pilot Program. Records of students who did not use MathXL during the 2008 – 2009 school year will be used for a baseline comparison.

4.2 Thoughts Concerning Online Learning and MathXL

When confronted with the topic concerning online learning, there are strengths and weaknesses as well as pros and cons, to address. Online learning systems have become more advanced and available to the mathematics educators. Technology is the growing trend and students have responded well to it. Online learning systems offer many potential advantages to both the student and teacher. It is obvious that homework is fundamental, for accomplishing procedural understanding. The old saying “practice makes perfect” maybe over stated, but if taken in perspective, practice does help accomplish procedural understanding. This is what makes MathXL so beautiful. When learning specific mathematical concepts, I still believe that face to face is important and lends to better understanding. Yet the great thing about the MathXL resources is that once a lesson is presented in a classroom setting, the student has the “help me solve this problem”, “show me an example”, “textbook” or “e-mail my instructor” tutorial right at their fingertips once they are on their own. The student knows immediately if their work is correct. If there is a mistake, the student can reattempt the problem. This gives the student ample opportunities to succeed while freeing up time in class for instruction. As for my thoughts on MathXL and its future, I believe it will be here for a many years to come. It is growing rapidly throughout colleges and universities, while in the beginning stages for high schools. Technology is becoming the rule. MathXL is reasonably priced at $15 a year compared to the Aleks online program priced at $179.95 for 12 months. Neufeld Learning Systems (Understanding Math) is strictly software with tracking and networking capabilities, yet phenomenal for K-10. I am Anxious to see this programs online action. When interviewing users of MathXL specifically, both educator and student responded positively.

The following is an article from edNews@PearsonNewsletter,

High Schoolers Get College Ready with Pearson's MathXL

> At Louisiana's West St. John High School, a small-town school located about 25 miles up the Mississippi River from New Orleans, math teacher Shannon Smith says her students are more engaged in their learning and doing more practice problems using this computer-based math learning tool. And Smith's students say they believe they're much better prepared for college.
> According to LSU Pre-Calculus Math Coordinator Phoebe Rouse, who helped create a pilot program to bring LSU's math course to high schools using MathXL, "The beauty of MathXL is that it doesn't really matter where the student is when they're working the problems ... Wherever they are, as long as they have Internet access, they can access MathXL and do their work."
> These high school students spend only a short amount of time in a classroom listening to a traditional lecture. Rather, they spend most of their class time in the math lab using the software to actively work on math problems.
> Students in the program can earn college credit if they pass the final exam and gain admission to the university. "The students take the same homework, quizzes, tests and final exam that we do right here at LSU, but they never leave their high school and they use MathXL to do this," Rouse says.
> Both teachers and students say they like how the software is personalized and adapts to suit individual learning styles. Math teacher Jamie Colombo of Live Oak High School in Denham Springs, La., says her students get more individual one on one attention, which keeps both advanced and struggling students engaged in math.
> At Baton Rouge's McKinley High School, math teacher Bobby Stecher says his students benefit from being exposed to college-level material. "They've gained a lot of content knowledge, and they've learned how to be independent. And I think there are a lot of carryover skills for college classes, not just in math but for English or reading or any course that uses an online component ... I think they'll have an advantage," Stecher says.

Figure 4.1 Users of MathXL article

High Schoolers Get College Ready With Pearson's MathXL. edNews@PearsonNewsletter; Issue 2 May 2008 http://www.pearsoned.com/pr_2008/052708a.htm, along with a video clip on You Tube at: www.youtube.com/watch?v=_P53ieu6tyI, http://www.pearsoned.com/ednews/may08pages/mathxl.htm

With much positive considerations, there are many skeptics that say online mathematics is mindless drill and practice. Mindless, as defined in the Merriam Webster dictionary is requiring little attention or thought, and is not intellectually challenging or stimulating. When adding the words drill and practice to the term mindless, one may assume busy work. I think not. The goal for learning a new skill is for it to become automatic, long-lasting, and beyond the point of mastery. Practice is absolutely necessary if mastery is the goal whether online or paper pencil. Ethan Akin gives an outstanding presentation in his article, “In Defense of "Mindless Rote".

Daniel T. Willingham states; “The unexpected finding from cognitive science is that practice does not make perfect. Practice until you are perfect and you will be perfect only briefly. What's necessary is sustained practice. By sustained practice I mean regular, ongoing review or use of the target material (e.g., regularly using new calculating skills to solve increasingly more complex math problems, reflecting on recently-learned historical material as one studies a subsequent history unit, taking regular quizzes or tests that draw on material learned earlier in the year). This kind of practice past the point of mastery is necessary to meet any of these three important goals of instruction: acquiring facts and knowledge, learning skills, or becoming an expert”.

If the appropriate online learning system has been chosen, the factors that may hender the success lies with the individual and techonlogy. Major factors for the individual are maturity, motivation and preparedness. Technology concerns for mathematics, such as, having to type exactly what is programed for the correct answer and no equivalent forms. This issue is in the corrective stages. Internet access can be a problem. For some this issue can be resolved by planning a homework time and place to get complete assignments. Students may also use a guess and check method using online homework, but this method eventually catches up with the learner. Can online learning systems stand alone? Possibly, though I believe the best outcomes for learning is a balance or combination of the traditional methods and online software.

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APPENDIX A: TEXTBOOKS AVAILABLE ON MATHXL

Addison Wesley Books Available: Developmental Math: Beginning Algebra

Author	**Book Title**	**Ed.**	**©**	**ISBN** (for text & student access kit)
Akst, Bragg	Introductory Algebra through Applications (PB)	2	'09	0-321-58943-2
Akst, Bragg	Introductory and Intermediate Algebra through Applications (PB)	2	'09	0-321-58134-2
Bittinger	Introductory Algebra (PB)	10	'07	0-321-43919-8
Bittinger, Beecher	Developmental Mathematics (PB)	7	'08	0-321-51937-X
Bittinger, Beecher	Developmental Mathematics THEA Version (PB)	7	'08	TBA
Bittinger, Ellenbogen	Elementary Algebra: Concepts and Applications (HB)	8	'10	0-321-60972-7
Bittinger, Ellenbogen	Elementary Algebra: Concepts and Applications (HB)	7	'06	0-321-37857-1
Bittinger, Ellenbogen	Prealgebra and Introductory Algebra (PB)	2	'08	0-321-51938-8
Bittinger, Ellenbogen, Johnson	Elementary Algebra: Graphs & Models (HB)	1	'05	0-321-32324-6
Blair	Introductory Algebra (PB)	1	'06	0-321-43921-X
CA	California Algebra Readiness **School Division**	1	'07	N/A
Carson, Gillespie	Elementary Algebra with Early Systems of Equations (HB)	1	'06	0-321-28920-X
Carson, Gillespie, Jordan	Elementary Algebra (HB)	2	'07	0-321-44032-3

Consortium For Foundation Mathematics	Mathematics in Action: An Introduction to Algebraic, Graphical, and Numerical Problem Solving (PB)	3	'08	0-321-51860-8
Jordan, Palow	Integrated Arithmetic & Basic Algebra (PB)	4	'09	0-321-56921-0
Lial, Hestwood, Hornsby, McGinnis	Prealgebra & Introductory Algebra (PB)	3	'10	TBA
Lial, Hestwood, Hornsby, McGinnis	Prealgebra & Introductory Algebra (PB)	2	'07	0-321-44037-4
Lial, Hornsby, McGinnis	Beginning Algebra (HB)	10	'08	0-321-52263-X
Lial, Hornsby, McGinnis	Introductory Algebra (PB)	9	'10	0-321-61729-0
Lial, Hornsby, McGinnis	Introductory Algebra (PB)	8	'06	0-321-35150-9
Lial, Hornsby, McGinnis, Salzman, Hestwood	Developmental Mathematics: Basic Mathematics and Algebra (HB)	2	'10	TBA
Lial, Hornsby, McGinnis, Salzman, Hestwood	Developmental Mathematics: Basic Mathematics and Algebra (HB)	1	'08	0-321-51899-3
Rockswold, Krieger	Beginning Algebra with Applications & Visualization (HB)	2	'09	0-321-56558-4
Woodbury	Elementary Algebra (HB)	1	'09	TBA

Addison Wesley Books Available: Developmental Math: Beginning & Intermediate Algebra (combined)

Author	**Book Title**	**Ed.**	**©**	**ISBN** (for text & student access kit)

Bittinger, Beecher	Introductory and Intermediate Algebra (PB)	3	'07	0-321-43926-0
Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Concepts and Applications (HB)	5	'10	0-321-61701-0
Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Concepts & Applications (HB)	4	'06	0-321-37865-2
Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Graphs & Models (HB)	3	'08	0-321-52647-3
Bittinger, Penna	Foundations of Mathematics (PB)	1	'04	0-321-20734-3
Carson, Gillespie, Jordan	Elementary and Intermediate Algebra (HB)	2	'07	0-321-44541-4
Lial, Hornsby, McGinnis	Beginning and Intermediate Algebra (HB)	4	'08	0-321-52062-9
Lial, Hornsby, McGinnis	Introductory and Intermediate Algebra (PB)	4	'10	0-321-61730-4
Lial, Hornsby, McGinnis	Introductory and Intermediate Algebra (PB)	3	'06	0-321-35369-2
McKenna, Kirk	Beginning and Intermediate Algebra: Building a Foundation (HB)	1	'10	0-321-61650-2
Rockswold, Krieger	Beginning and Intermediate Algebra with Applications & Visualization (HB)	2	'09	0-321-57553-9
Woodbury	Elementary and Intermediate Algebra (	2	'09	TBA

http://www.mymathlab.com/mathxl/books.php

Prentice Hall Books Available: Developmental Math: Beginning Algebra

Author	**Book Title**	**Ed.**	**©**	**ISBN** (for text & student access kit)
Angel	Elementary Algebra for College Students (HB)	7	'07	0-13-134906-6
Angel	Elementary Algebra for College Students Early Graphing (HB)	3	'08	0-13-134909-0
Blitzer	Introductory Algebra for College Students (HB)	5	'09	0-321-56864-8
CA	California Algebra Readiness **School Division**	1	'07	N/A
CSU	ELM Exam Prep Course **School Division**	1	'07	N/A
Lehmann	Elementary Algebra: Graphs and Authentic Applications (HB)	1	'08	0-13-134912-0
Martin-Gay	Beginning Algebra (HB)	5	'09	0-321-57150-9
Martin-Gay	Developmental Mathematics (PB)	1	'07	0-13-239032-9
Martin-Gay	Introductory Algebra (PB)	3	'07	0-13-175287-1
Martin-Gay	Prealgebra and Introductory Algebra (PB)	2	'08	0-13-134905-8
Sullivan, Struve, Mazzarella	Elementary Algebra (HB)	2	'10	0-321-56220-8
Sullivan III, Struve	Elementary Algebra (HB)	1	'07	0-13-228377-8
Tobey, Slater	Beginning Algebra (PB)	7	'10	0-321-61479-8
Tobey, Slater	Beginning Algebra (PB)	6	'06	0-13-186584-6
				(List continued)
Tobey, Slater, Blair	Beginning Algebra: Early Graphing (PB)	2	'10	0-321-61654-5

Tobey, Slater, Blair	Beginning Algebra: Early Graphing (PB)	1	'06	0-13-218831-7

http://www.mymathlab.com/mathxl/books.php

Prentice Hall Books Available: Developmental Math: Beginning & Intermediate Algebra (combined)

Author	**Book Title**	**Ed.**	**©**	**ISBN** (for text & student access kit)
Angel	Elementary and Intermediate Algebra for College Students (HB)	3	'08	0-13-134910-4
Blitzer	Essentials of Introductory and Intermediate Algebra for College Students (HB)	1	'06	0-13-169595-9
Blitzer	Introductory and Intermediate Algebra for College Students (HB)	3	'09	0-321-56372-7
Lehmann	Elementary & Intermediate Algebra (HB)	1	'09	TBA
Martin-Gay	Algebra: A Combined Approach (PB)	3	'07	0-13-175406-8
Martin-Gay	Beginning and Intermediate Algebra (HB)	4	'09	0-321-57164-9
Sullivan, Struve, Mazzarella	Elementary & Intermediate Algebra (HB)	2	'10	0-321-64957-5
Sullivan III, Struve, Mazzarella	Elementary & Intermediate Algebra (HB)	1	'07	0-13-243295-1
Thomasson, Pesut	Experiencing Introductory & Intermediate Algebra Through Functions and Graphs (HB)	3	'07	0-13-175339-8
Tobey, Slater, Blair	Beginning and Intermediate Algebra (PB)	3	'10	0-321-61480-1

Tobey, Slater, Blair	Beginning and Intermediate Algebra (PB)	2	'06	0-13-186582-X

Addison Wesley Books Available: All Books

Author	**Book Title**	**Ed.**	**©**	**ISBN** (for text & student access kit)
	ADP: Algebra II Online Course	1	'09	N/A
Adams	Calculus: A Complete Course (HB) **Pearson Canada**	6	'06	0-13-204022-0
Akst, Bragg	Basic Mathematics through Applications (PB)	4	'09	0-321-58527-5
Akst, Bragg	Fundamental Mathematics through Applications (PB)	4	'09	TBA
Akst, Bragg	Intermediate Algebra through Applications (PB)	2	'09	0-321-58541-0
Akst, Bragg	Introductory Algebra through Applications (PB)	2	'09	0-321-58943-2
Akst, Bragg	Introductory and Intermediate Algebra through Applications (PB)	2	'09	0-321-58134-2
Angel, Abbott, Runde	A Survey of Mathematics with Applications (HB)	8	'09	0-321-56687-4
Angel, Abbott, Runde	A Survey of Mathematics with Applications, Expanded (HB)	8	'09	0-321-55070-6
Beecher, Penna, Bittinger	Algebra and Trigonometry (HB)	3	'08	0-321-50916-1
Beecher, Penna, Bittinger	College Algebra (HB)	3	'08	0-321-50820-3

Beecher, Penna, Bittinger	Precalculus (HB)	3	'08	0-321-50489-5
				(List continued)
Bennett, Briggs	Using and Understanding Mathematics: A Quantitative Reasoning Approach (HB)	4	'08	0-321-50490-9
Bennett, Briggs, Triola	Statistical Reasoning for Everyday Life (HB)	3	'09	0-321-56438-3
Berenson	Business Statistics **Pearson Australia**	1	'09	9781442500327
Berenson	Basic Business Statistics, MathXL Edition **Pearson Australia**	1	'09	9781442508439
Billstein, Liebskind, Lott	A Problem Solving Approach to Mathematics for Elementary School Teachers (HB)	10	'10	0-321-61604-9
Billstein, Libeskind, Lott	A Problem Solving Approach to Mathematics for Elementary School Teachers (HB)	9	'07	0-321-44252-0
Bittinger	Basic Mathematics (PB)	10	'07	0-321-43611-3
Bittinger	Calculus and Its Applications (HB)	8	'04	0-321-21469-2
Bittinger	Fundamental Mathematics (PB)	4	'07	0-321-44426-4
Bittinger	Intermediate Algebra (PB)	10	'07	0-321-43920-1
Bittinger	Introductory Algebra (PB)	10	'07	0-321-43919-8
Bittinger, Beecher	Developmental Mathematics (PB)	7	'08	0-321-51937-X
Bittinger, Beecher	Developmental Mathematics	7	'08	TBA

	THEA Version (PB)			
Bittinger, Beecher	Introductory and Intermediate Algebra (PB)	3	'07	0-321-43926-0
Bittinger, Beecher, Ellenbogen, Penna	Algebra and Trigonometry: Graphs & Models (HB)	4	'09	0-321-56689-0
Bittinger, Beecher, Ellenbogen, Penna	College Algebra: Graphs & Models (HB)	4	'09	0-321-56688-2
Bittinger, Beecher, Ellenbogen, Penna	Precalculus: Graphs & Models (HB)	4	'09	0-321-56276-3
Bittinger, Ellenbogen	Calculus and Its Applications (HB)	9	'08	0-321-51886-1
Bittinger, Ellenbogen	Elementary Algebra: Concepts and Applications (HB)	8	'10	0-321-60972-7
Bittinger, Ellenbogen	Elementary Algebra: Concepts and Applications (HB)	7	'06	0-321-37857-1
Bittinger, Ellenbogen	Intermediate Algebra: Concepts and Applications (HB)	8	'10	0-321-56217-8
Bittinger, Ellenbogen	Intermediate Algebra: Concepts and Applications (HB)	7	'06	0-321-37890-3
Bittinger, Ellenbogen	Prealgebra and Introductory Algebra (PB)	2	'08	0-321-51938-8
Bittinger, Ellenbogen, Johnson	Elementary Algebra: Graphs & Models (HB)	1	'05	0-321-32324-6
Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Concepts and Applications (HB)	5	'10	0-321-61701-0
Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Concepts & Applications (HB)	4	'06	0-321-37865-2

Bittinger, Ellenbogen, Johnson	Elementary and Intermediate Algebra: Graphs & Models (HB)	3	'08	0-321-52647-3
Bittinger, Ellenbogen, Johnson	Intermediate Algebra: Graphs and Models (HB)	3	'08	0-321-51549-8
Bittinger, Ellenbogen, Johnson	Prealgebra (PB)	5	'08	0-321-51905-1
Bittinger, Penna	Basic Mathematics with Early Integers (PB)	1	'07	0-321-52058-0
Bittinger, Penna	Foundations of Mathematics (PB)	1	'04	0-321-20734-3
Blair	Intermediate Algebra (PB)	1	'07	0-321-43937-6
Blair	Introductory Algebra (PB)	1	'06	0-321-43921-X
Bock, Velleman, De Veaux	Stats: Modeling the World	3	'10	0-321-61718-5
Bock, Velleman, DeVeaux	Stats: Modeling the World	2	'07	0-321-44007-2
CA	California Algebra Readiness **School Division**	1	'07	N/A
Carson	Prealgebra (PB)	3	'09	0-321-56557-6
Carson, Gillespie	Elementary Algebra with Early Systems of Equations	1	'06	0-321-28920-X
Carson, Gillespie, Jordan	Elementary Algebra (HB)	2	'07	0-321-44032-3
Carson, Gillespie, Jordan	Elementary and Intermediate Algebra (HB)	2	'07	0-321-44541-4
Carson, Gillespie, Jordan	Intermediate Algebra (HB)	2	'07	0-321-44033-1
Clark, Brechner	Applied Basic Mathematics (PB)	1	'08	0-321-51914-0

Consortium For Foundation Mathematics	Mathematics in Action: Algebraic, Graphical, and Trigonometric Problem Solving (PB)	3	'08	0-321-52262-1
Consortium For Foundation Mathematics	Mathematics in Action: An Introduction to Algebraic, Graphical, and Numerical Problem Solving (PB)	3	'08	0-321-51860-8
Consortium For Foundation Mathematics	Mathematics in Action: Prealgebra Problem Solving (PB)	2	'08	0-321-51792-X
Demana, Waits, Foley, Kennedy	Precalculus: Graphical, Numerical, Algebraic (HB)	7	'07	0-321-45766-8
DeVeaux, Velleman, Bock	Intro Stats (HB)	3	'09	0-321-56649-1
DeVeaux, Velleman, Bock	Stats: Data and Models (HB)	2	'08	0-321-51076-3
Dugopolski	College Algebra (HB)	4	'07	0-321-44767-0
Dugopolski	College Algebra and Trigonometry (HB)	4	'07	0-321-44438-8
Dugopolski	Fundamentals of Precalculus (HB)	2	'09	0-321-56441-3
Dugopolski	Precalculus (HB)	4	'07	0-321-41787-9
Dugopolski	Precalculus: Functions & Graphs (HB)	3	'09	0-321-56277-1
Dugopolski	Trigonometry (HB)	2	'07	0-321-44782-4
Goshaw	Concepts of Calculus with Applications (HB)	1	'08	0-321-51887-X
Finney, Demana, Waits, Kennedy	Calculus: Graphical, Numerical, Algebraic (HB)	3	'07	TBA
Harshbarger, Yocco	College Algebra in Context	3	'10	0-321-60975-1

	with Applications for the Managerial, Life, and Social Sciences (HB)			
Harshbarger, Yocco	College Algebra in Context with Applications for the Managerial, Life and Social Sciences (HB)	2	'07	0-321-41788-7
Hass, Weir, Thomas	University Calculus (HB)	1	'07	TBA
Hass, Weir, Thomas	University Calculus: Alternate Edition (HB)	1	'08	0-321-51888-8
Hass, Weir, Thomas	University Calculus: Elements with Early Transcendentals (HB)	1	'09	TBA
Hummelbrunner, Coombs	Contemporary Business Mathematics with Canadian Applications **Pearson Canada**	8	'08	0-13-615608-8
Hummelbrunner, Coombs	Mathematics of Finance with Canadian Applications **Pearson Canada**	6	'08	0-13-207350-1
Hornsby, Lial, Rockswold	A Graphical Approach to Algebra and Trigonometry (HB)	4	'07	0-321-41789-5
Hornsby, Lial, Rockswold	A Graphical Approach to College Algebra (HB)	4	'07	0-321-44439-6
Hornsby, Lial, Rockswold	A Graphical Approach to Precalculus (HB)	4	'07	0-321-44769-7
Hornsby, Lial, Rockswold	A Graphical Approach to Precalculus with Limits (HB)	4	'07	0-321-44440-X
Hutchison, Yannotta	* Mathematics for New Technologies (PB)	1	'04	0-321-22695-X
Jordan, Palow	Integrated Arithmetic & Basic Algebra (PB)	4	'09	0-321-56921-0

Lial, Greenwell, Ritchey	Calculus with Applications (HB)	9	'08	0-321-51889-6
Lial, Greenwell, Ritchey	Calculus with Applications, Brief Version (HB)	9	'08	TBA
Lial, Greenwell, Ritchey	Finite Mathematics (HB)	9	'08	0-321-51904-3
Lial, Greenwell, Ritchey	Finite Mathematics and Calculus with Applications (HB)	8	'08	0-321-52243-5
Lial, Hestwood	Prealgebra (PB)	4	'10	0-321-61649-9
Lial, Hestwood	Prealgebra: An Integrated Approach (HB)	1	'07	0-321-44034-X
Lial, Hestwood, Hornsby, McGinnis	Prealgebra & Introductory Algebra (PB)	3	'10	TBA
Lial, Hestwood, Hornsby, McGinnis	Prealgebra & Introductory Algebra (PB)	2	'07	0-321-44037-4
Lial, Hornsby, McGinnis	Algebra for College Students (HB)	6	'08	0-321-51898-5
Lial, Hornsby, McGinnis	Beginning Algebra (HB)	10	'08	0-321-52263-X
Lial, Hornsby, McGinnis	Beginning and Intermediate Algebra (HB)	4	'08	0-321-52062-9
Lial, Hornsby, McGinnis	Intermediate Algebra (HB)	10	'08	0-321-52061-0
Lial, Hornsby, McGinnis	Intermediate Algebra (PB)	9	'10	0-321-61648-0
Lial, Hornsby, McGinnis	Intermediate Algebra (PB)	8	'06	0-321-35153-3
Lial, Hornsby, McGinnis	Introductory Algebra (PB)	9	'10	0-321-61729-0

Lial, Hornsby, McGinnis	Introductory Algebra (PB)	8	'06	0-321-35150-9
Lial, Hornsby, McGinnis	Introductory and Intermediate Algebra (PB)	4	'10	0-321-61730-4
Lial, Hornsby, McGinnis	Introductory and Intermediate Algebra (PB)	3	'06	0-321-35369-2
Lial, Hornsby, McGinnis, Salzman, Hestwood	Developmental Mathematics: Basic Mathematics and Algebra (HB)	2	'10	TBA
Lial, Hornsby, McGinnis, Salzman, Hestwood	Developmental Mathematics: Basic Mathematics and Algebra (HB)	1	'08	0-321-51899-3
Lial, Hornsby, Schneider	College Algebra (HB)	10	'09	0-321-56690-4
Lial, Hornsby, Schneider	College Algebra and Trigonometry (HB)	4	'09	0-321-56692-0
Lial, Hornsby, Schneider	Essentials of College Algebra (PB)	1	'07	0-321-41790-9
Lial, Hornsby, Schneider	Essentials of College Algebra, Alternate Edition (HB)	1	'08	0-321-51236-7
Lial, Hornsby, Schneider	Precalculus (HB)	4	'09	0-321-56442-1
Lial, Hornsby, Schneider	Trigonometry (HB)	9	'09	0-321-56278-X
Lial, Hungerford, Holcomb	Finite Mathematics with Applications (HB)	9	'07	0-321-44073-0
Lial, Hungerford, Holcomb	Mathematics with Applications (HB)	9	'07	0-321-43735-7
Lial, Salzman	Essential Mathematics (PB)	3	'10	0-321-61728-2
Lial, Salzman	Essential Mathematics (PB)	2	'06	0-321-35363-3

Lial, Salzman, Hestwood	Basic College Mathematics (PB)	8	'10	0-321-61727-4
Lial, Salzman, Hestwood	Basic College Mathematics (PB)	7	'06	0-321-35344-7
Long, DeTemple	Mathematical Reasoning for Elementary Teachers (HB)	5	'09	0-321-55512-0
McKenna, Kirk	Beginning and Intermediate Algebra: Building a Foundation (HB)	1	'10	0-321-61650-2
Miller, Heeren, Hornsby	Mathematical Ideas (HB)	11	'08	0-321-51249-9
Miller, Heeren, Hornsby	Mathematical Ideas, Expanded (HB)	11	'08	0-321-50824-6
Miller, Salzman, Clendenen	Business Mathematics (PB)	11	'09	0-321-55734-4
O'Daffer, et al	Mathematics for Elementary School Teachers (HB)	4	'08	0-321-52051-3
Pirnot	Mathematics All Around (HB)	4	'10	0-321-61733-9
Pirnot	Mathematics All Around (HB)	3	'07	0-321-44766-2
Prior	Basic Mathematics (PB)	1	'10	0-321-61651-0
Prior	Prealgebra (PB)	1	'10	0-321-61734-7
Ratti, McWaters	College Algebra and Trigonometry(HB)	1	'08	0-321-50563-8
Ratti, McWaters	College Algebra (HB)	1	'08	0-321-50562-X
Ratti, McWaters	Precalculus (HB)	1	'08	0-321-50564-6
Ratti, McWaters	Precalculus: A Unit Circle Approach (HB)	1	'10	0-321-61652-9
Ratti, McWaters	Trigonometry (HB)	1	'10	0-321-61735-5

Rockswold	Algebra and Trigonometry with Modeling &Visualization (HB)	4	'10	0-321-61751-7
Rockswold	College Algebra and Trigonometry with Modeling & Visualization (HB)	3	'06	0-321-37116-X
Rockswold	College Algebra with Modeling & Visualization (HB)	4	'10	0-321-61736-3
Rockswold	College Algebra with Modeling & Visualization (HB)	3	'06	0-321-34141-4
Rockswold	Essentials of College Algebra with Modeling and Visualization (HB)	3	'08	0-321-50821-1
Rockswold	Precalculus with Modeling & Visualization (HB)	4	'10	0-321-61653-7
Rockswold	Precalculus with Modeling & Visualization (HB)	3	'06	0-321-36844-4
Rockswold, Krieger	Beginning and Intermediate Algebra with Applications & Visualization	2	'09	0-321-57553-9
Rockswold, Krieger	Intermediate Algebra with Applications & Visualization (HB)	3	'09	0-321-56922-9
Salzman, Miller, Clendenen	Mathematics for Business (HB)	8	'07	0-321-43683-0
Sharpe, De Veaux, Velleman	Business Statistics (HB)	1	'10	0-321-61737-1
Skuce	Analyzing Data and Making Decisions **Pearson Canada**	1	'08	TBA
Tannenbaum	Excursions in Modern Mathematics (HB)	7	'10	0-321-60976-X

Thomas, Weir, Hass	Thomas' Calculus, Early Transcendentals (HB)	12	'10	TBA
Thomas, Hass, Weir, Giordano	Thomas' Calculus Early Transcendentals Media Upgrade (HB)	11	'08	0-321-51817-9
Thomas, Weir, Hass, Giordano	Thomas' Calculus, Early Transcendentals (HB)	11	'06	0-321-39242-6
Thomas, Weir, Hass, Giordano	Thomas' Calculus (HB)	12	'10	0-321-61754-1
Thomas, Hass, Weir, Giordano	Thomas' Calculus Media Upgrade (HB)	11	'08	0-321-53843-9
Thomas, Weir, Hass, Giordano	Thomas' Calculus (HB)	11	'05	0-321-32443-9
Trim	Calculus for Engineers (HB) **Pearson Canada**	4	'08	TBD
Triola	Elementary Statistics (HB)	11	'10	0-321-61739-8
Triola	Elementary Statistics (HB)	10	'07	0-321-44009-9
Triola	Elementary Statistics Using Excel	4	'10	0-321-61740-1
Triola	Elementary Statistics Using Excel (HB)	3	'07	0-321-44010-2
Triola	Elementary Statistics Using the Graphing Calculator: For TI-83/84 Plus (HB)	2	'08	0-321-51879-9
Triola	Essentials of Statistics (PB)	3	'08	0-321-50411-9
Washington	Basic Technical Mathematics (HB)	9	'09	0-13-606532-5
Washington	Basic Technical Mathematics with Calculus (HB)	9	'09	0-13-606536-8
Washington	Basic Technical Mathematics with Calculus, SI Version	9	'10	TBD

	(HB) **Pearson Canada**			
Washington, Triola, Reda	Introduction to Technical Mathematics (HB)	5	'08	0-321-52053-X
Weiss	Elementary Statistics (HB)	7	'08	0-321-52039-4
Weiss	Introductory Statistics (HB)	8	'08	0-321-51075-5
Woodbury	Elementary Algebra (HB)	1	'09	TBA
Woodbury	Elementary and Intermediate Algebra (HB)	2	'09	TBA
Woodbury	Intermediate Algebra (HB)	1	'09	0-321-58777-4
Young, Lee, Long, Graening	Finite Mathematics (HB)	1	'04	0-321-24658-6

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Prentice Hall Books Available: All Books

Author	Book Title	Ed.	©	**ISBN** (for text & student access kit)
	ADP: Algebra II Online Course	1	'09	N/A
Adams	Calculus: A Complete Course (HB) **Pearson Canada**	6	'06	0-13-204022-0
Agresti, Franklin	Statistics: The Art and Science of Learning from Data (HB)	2	'09	0-13-604288-0
Angel	Algebra for College Students (HB)	3	'07	0-13-512605-3
Angel	Elementary Algebra for College Students (HB)	7	'07	0-13-134906-6
Angel	Elementary Algebra for College Students Early Graphing (HB)	3	'08	0-13-134909-0
Angel	Elementary and Intermediate Algebra for College Students (HB)	3	'08	0-13-134910-4
Angel	Intermediate Algebra for College Students (HB)	7	'08	0-13-134907-4
Barnett, Ziegler, Byleen	Calculus for Business, Economics, Life Sciences & Social Sciences (HB)	11	'08	0-13-235518-3
Barnett, Ziegler, Byleen	College Mathematics for Business, Economics, Life Sciences, & Social Sciences (HB)	11	'08	0-13-513147-2
Barnett, Ziegler, Byleen	Finite Mathematics for Business, Economics, Life Sciences and Social Sciences (HB)	11	'08	0-13-235520-5

(List continued)

Berenson	Business Statistics **Pearson Australia**	1	'09	9781442500327
Berenson	Basic Business Statistics, MathXL Edition **Pearson Australia**	1	'09	9781442508439
Berenson, Levine, Krehbiel	Basic Business Statistics (HB)	11	'09	0-13-507250-6
Blair, Tobey, Slater	Prealgebra (PB)	4	'10	0-321-61642-1
Blair, Tobey, Slater	Prealgebra (PB)	3	'06	0-13-186571-4
Blitzer	Algebra and Trigonometry (HB)	4	'10	0-321-61644-8
Blitzer	Algebra and Trigonometry (HB)	3	'07	0-321-63564-7
Blitzer	Algebra and Trigonometry: An Early Functions Approach	2	'10	0-321-61645-6
Blitzer	Algebra and Trigonometry: An Early Functions Approach (HB)	1	'07	0-13-221897-6
Blitzer	Algebra for College Students (HB)	6	'09	0-321-56517-7
Blitzer	College Algebra (HB)	5	'10	0-321-61646-4
Blitzer	College Algebra (HB)	4	'07	0-13-226851-5
Blitzer	College Algebra Essentials (HB)	3	'10	0-321-61703-7
Blitzer	College Algebra Essentials (HB)	2	'07	0-13-228113-9
Blitzer	College Algebra: An Early Functions Approach (HB)	2	'10	0-321-61704-5
Blitzer	College Algebra: An Early Functions Approach (HB)	1	'07	0-13-172751-6
Blitzer	Essentials of Intermediate Algebra for College Students (HB)	1	'06	0-13-169593-2

Blitzer	Essentials of Introductory and Intermediate Algebra for College Students (HB)	1	'06	0-13-169595-9
Blitzer	Intermediate Algebra for College Students (HB)	5	'09	0-321-56370-0
Blitzer	Introductory Algebra for College Students (HB)	5	'09	0-321-56864-8
Blitzer	Introductory and Intermediate Algebra for College Students (HB)	3	'09	0-321-56372-7
Blitzer	Precalculus (HB)	4	'10	0-321-60098-3
Blitzer	Precalculus (HB)	3	'07	0-321-63563-9
Blitzer	Precalculus Essentials (HB)	3	'10	TBA
Blitzer	Precalculus Essentials (HB)	2	'07	0-13-225048-9
Blitzer	Thinking Mathematically (HB)	4	'08	0-13-600810-0
CA	California Algebra Readiness **School Division**	1	'07	N/A
Cleaves, Hobbs	Business Math (PB)	8	'09	0-13-607050-7
Cleaves, Hobbs	Business Math, Brief Version (PB)	8	'09	0-13-814720-5
Cleaves, Hobbs	College Mathematics: 2009 Update with MyMathLab (PB)	1	'09	0-13-606540-6
Croft, Davison	Foundation Maths (PB)	4	'06	
CSU	ELM Exam Prep Course **School Division**	1	'07	N/A
Edwards, Penney	Algebra Review Course* for Calculus, Early Transcendentals *Includes only Precalculus review material	7	'08	0-13-236414-X

Georgia	Georgia Math IV (Demana and Agresti) **School Division**	1	'07	N/A
Georgia	Georgia Math IV (Sullivan and Agresti) **School Division**	1	'07	N/A
Goldstein, Schneider, Lay, Asmar	Brief Calculus and Its Applications (HB)	12	'10	0-321-61725-8
Goldstein, Schneider, Lay, Asmar	Brief Calculus and Its Applications (HB)	11	'07	0-13-238725-5
Goldstein, Schneider, Lay, Asmar	Calculus and Its Applications (HB)	12	'10	0-321-61722-3
Goldstein, Schneider, Lay, Asmar	Calculus and Its Applications (HB)	11	'07	0-13-238723-9
Goldstein, Schneider, Siegel	Finite Mathematics and Its Applications (HB)	10	'10	0-321-61723-1
Goldstein, Schneider, Siegel	Finite Mathematics and Its Applications (HB)	9	'07	0-13-238720-4
Hummelbrunner, Coombs	Contemporary Business Mathematics with Canadian Applications **Pearson Canada**	8	'08	0-13-615608-8
Hummelbrunner, Coombs	Mathematics of Finance with Canadian Applications **Pearson Canada**	6	'08	0-13-207350-1
Larson, Farber	Elementary Statistics: Picturing the World (HB)	4	'09	0-321-56873-7
Lehmann	Elementary Algebra: Graphs and Authentic Applications (HB)	1	'08	0-13-134912-0
Lehmann	Elementary & Intermediate Algebra (HB)	1	'09	TBA
Lehmann	Intermediate Algebra: Functions	3	'08	0-13-134911-2

	& Authentic Applications (HB)			
Levine, Krehbiel, Berenson	Business Statistics: A First Course (PB)	5	'10	TBA
Martin-Gay	Algebra: A Combined Approach (PB)	3	'07	0-13-175406-8
Martin-Gay	Basic College Mathematics (PB)	3	'06	0-13-236848-X
Martin-Gay	Basic College Mathematics with Early Integers (PB)	1	'07	0-13-222352-X
Martin-Gay	Beginning Algebra (HB)	5	'09	0-321-57150-9
Martin-Gay	Beginning and Intermediate Algebra (HB)	4	'09	0-321-57164-9
Martin-Gay	Developmental Mathematics (PB)	1	'07	0-13-239032-9
Martin-Gay	Intermediate Algebra (HB)	5	'09	0-321-56516-9
Martin-Gay	Intermediate Algebra (PB)	3	'07	0-13-204810-8
Martin-Gay	Introductory Algebra (PB)	3	'07	0-13-175287-1
Martin-Gay	Prealgebra (PB)	5	'08	0-13-134904-X
Martin-Gay	Prealgebra and Introductory Algebra (PB)	2	'08	0-13-134905-8
Martin-Gay, Greene	Intermediate Algebra: A Graphing Approach (HB)	4	'09	0-321-57152-5
McClave, Benson, Sincich	Statistics for Business and Economics	10	'08	0-13-814536-9
McClave, Mendenhall, Sincich	A First Course in Statistics	10	'09	TBA
McClave, Sincich	Statistics (HB)	11	'09	TBA
Miller, Salzman,	Business Mathematics (PB)	11	'09	0-321-55734-4

Clendenen

Newbold, Carlson, Thorne	Statistics for Business and Economics (HB)	7	'10	TBA
Skuce	Analyzing Data and Making Decisions **Pearson Canada**	1	'08	TBA
Sullivan	Algebra and Trigonometry (HB)	8	'08	0-13-148695-0
Sullivan	Algebra and Trigonometry Enhanced with Graphing Utilities (HB)	5	'09	TBA
Sullivan	College Algebra (HB)	8	'08	0-13-134953-8
Sullivan	College Algebra Enhanced with Graphing Utilities (HB)	5	'09	TBA
Sullivan	Precalculus (HB)	8	'08	0-13-240567-9
Sullivan	Precalculus Enhanced with Graphing Utilities (HB)	5	'09	TBA
Sullivan	Trigonometry: A Unit Circle Approach (HB)	8	'08	0-13-236036-5
Sullivan	Trigonometry: A Right Triangle Approach (HB)	5	'09	TBA
Sullivan III	Fundamentals of Statistics (PB)	2	'08	0-13-205057-9
Sullivan III	Statistics: Informed Decisions Using Data (HB)	3	'10	0-321-61738-X
Sullivan III	Statistics: Informed Decisions Using Data (HB)	2	'07	0-13-513488-9
Sullivan, Struve, Mazzarella	Elementary Algebra (HB)	2	'10	0-321-56220-8
Sullivan III, Struve	Elementary Algebra (HB)	1	'07	0-13-228377-8

Sullivan, Struve	Intermediate Algebra (HB)	2	'10	0-321-56219-4
Sullivan III, Struve	Intermediate Algebra (HB)	1	'07	0-13-204816-7
Sullivan, Struve, Mazzarella	Elementary & Intermediate Algebra (HB)	2	'10	0-321-64957-5
Sullivan III, Struve, Mazzarella	Elementary & Intermediate Algebra (HB)	1	'07	0-13-243295-1
Sullivan, Sullivan III	College Algebra: Concepts through Functions (HB)	1	'07	0-13-226987-2
Sullivan, Sullivan III	Precalculus: Concepts through Functions, A Right Triangle Approach to Trigonometry (HB)	1	'07	0-13-229480-X
Sullivan, Sullivan III	Precalculus: Concepts through Functions, A Unit Circle Approach to Trigonometry (HB)	1	'07	0-13-226977-5
Thomasson, Pesut	Experiencing Introductory & Intermediate Algebra Through Functions and Graphs (HB)	3	'07	0-13-175339-8
Tobey, Slater, Blair	Basic College Mathematics (PB)	6	'09	0-321-56554-1
Tobey, Slater	Basic College Mathematics (PB)	5	'06	0-13-197323-1
Tobey, Slater	Beginning Algebra (PB)	7	'10	0-321-61479-8
Tobey, Slater	Beginning Algebra (PB)	6	'06	0-13-186584-6
Tobey, Slater, Blair	Essentials of Basic College Mathematics (PB)	2	'09	0-321-56555-X
Tobey, Slater	Essentials of Basic College Mathematics (PB)	1	'06	0-13-218830-9
Tobey, Slater	Intermediate Algebra (PB)	6	'10	0-321-56221-6
Tobey, Slater	Intermediate Algebra (PB)	5	'06	0-13-186588-9
Tobey, Slater, Blair	Beginning Algebra: Early Graphing (PB)	2	'10	0-321-61654-5

Tobey, Slater, Blair	Beginning Algebra: Early Graphing (PB)	1	'06	0-13-218831-7
Tobey, Slater, Blair	Beginning and Intermediate Algebra (PB)	3	'10	0-321-61480-1
Tobey, Slater, Blair	Beginning and Intermediate Algebra (PB)	2	'06	0-13-186582-X
Trim	Calculus for Engineers (HB) **Pearson Canada**	4	'08	TBD
Varberg, Purcell, Rigdon	Calculus (HB)	9	'07	0-13-188271-6
Varberg, Purcell, Rigdon	Calculus Early Transcendentals (HB)	1	'07	0-13-225857-9
Washington	Basic Technical Mathematics (HB)	9	'09	0-13-606532-5
Washington	Basic Technical Mathematics with Calculus (HB)	9	'09	0-13-606536-8
Washington	Basic Technical Mathematics with Calculus, SI Version (HB) **Pearson Canada**	9	'10	TBD

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APPENDIX B: DATA

Actual Results of Test Group MathXL Assignments
Course: Algebra I

Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Instructor: Darlene Ford Enrollment: 41
Test Group Data: MathXL Homework Assignments

Chapter 1

	Symbols and Sets of Numbers	Fraction Operations	Variable Expressions and Equations	Operations with Real Numbers	Properties of Real Numbers
Student number	Score	Score	Score	Score	Score
1	100	100	100	100	100
2	100	100	100	100	100
3	100	100	100	100	100
4	100	100	100	100	100
5	100	100	100	100	100
6	100	100	95.5	100	100
7	100	93.3	100	40	100
8	100	100	100	94	100
9	100	86.7	90.9	100	100
10	100	100	100	100	100
11	100	100	100	100	100
12	100	100	100	100	100
13	100	100	100	100	100
14	100	100	100	100	100
15	100	100	100	100	100
16	100	100	100	100	95.5
17	100	100	100	100	100
18	100	100	100	100	100
19	100	100	100	100	100
20	100	100	100	100	100
21	100	100	100	100	100
22	100	100	100	98	100
23	100	100	100	100	100
24	100	100	100	100	100
25	100	93.3	100	100	100
26	100	100	100	100	100
27	93.3	93.3	90.9	100	100
28	100	100	100	100	100
29	100	93.3	100	94	95.5

30	100	100	100	100	100
31	100	100	100	100	100
32	100	100	100	100	100
33	100	100	100	100	100
34	100	100	100	100	100
35	100	100	90.9	98	95.5
36	100	100	100	100	100
37					
38	100	100	100	100	100
39	100	100	95.5	100	100
40	100	100	100	92	100
41	100	100	100	100	100

Chapter 2

	Simplifing Algebraic Expressions	Addition and Multipli-cation Properties	Solving Linear Equations	Problem Solving	Formulas and Problem Solving	Solving w/ Percent/ Distance/ Mixtures/ Interest	Linear Inequalities
Student number	Score	Score	Score	Score	Score	Score	Score
1	100	100	86.7	100	100	50	100
2	100	100	100	100	100	100	100
3	100	100	66.7	100	100	100	100
4	100	100	100	100	100	100	100
5	100	100	100	100	100	40	100
6	100	100	100	100	100	100	100
7	66.7		86.7	100	100	50	100
8	100	100	100	100	100		82.2
9	100	93.3	93.3	100	80	50	94.4
10	100	100	100	100	100	100	100
11	100	100	100	100	100	100	100
12	100	100	93.3	100	100	40	100
13	100	100	100	100	100		100
14	100	100	93.3	100	100		100
15	100	100	100	100	100	100	100
16	100	86.7	100	100	100	40	100
17	100	93.3	6.7	96.3	13.3		46.7
18	100	100	100	100	100	0	100
19	100	100	100	100	100	100	100
20	100	100	40	100	100	20	100
21	100	100	100	100	100	100	100
22	100	100	100	100	100	10	13.3
23	100	100	100	100	100	100	100
24	100	100	93.3	100	100	20	93.3
25	100	93.3	100	100	100	20	100

26	100	100	100	100	100	100	100
27	100	100	100	100	100		100
28	100	100	100	100	100	100	100
29	100	66.7	80	100	86.7	20	93.3
30	100	100	93.3	100	100	50	33.3
31	100	100	100	100	100	100	100
32	60	26.7	93.3	100	100	100	100
33	100	100	100	100	100	100	97.8
34	100	100	20	100	66.7	50	100
35	93.3	100	100	100	100	100	95.6
36	100	6.7		22.2	86.7	10	20
37			93.3	100	100	100	100
38	100	100	100	100	100	100	100
39	100	100	100	100	100	10	100
40	100	100	100	100	100		100
41	100	100	13.3	100	100	20	33.3

Chapter 3

	Reading Graphs and the Coordinate System	Graphing Linear Equations	Intercepts	Slope and Rate of Change	Slope Intercept Form	Point Slope Form	Functions
Student number	Score	Score	Score	Score	Score	Score	Score
1	100	100	100	100	100	100	100
2	100	100	90.9	100	100	100	100
3	100	94.2	90.9	86.7	100	92.9	100
4	100	100	100	100	100	100	100
5	100	100	100	100	100	100	100
6	100	100	100	100	100	100	100
7	100	97.4	95.5	100	83.3	0	52.9
8	92.8	88.3	90.9	100	79.2		100
9	100	100	100	100	100	100	100
10	100	98.7	100	93.3	100	96.4	100
11	100	97.4	100	100	100	64.3	100
12	98.8	100	100	100	100	100	100
13	100	100	100	100	100	100	100
14	97.1	100	70.5	66.7	100	100	100
15	100	96.4	97.7	100	100	96.4	97.1
16	100	98.7	84.1	100	100	100	100
17	100	91.9	27.3	93.3	100	100	100
18	95.4	98.7	90.9	93.3	100	96.4	100
19	100	100	100	100	100	100	
20	95.8	100	100	93.3	12.5	85.7	

21	100	100	100	100	100	100	100
22	88.3	73.4	100	100	100	21.4	76.5
23	100	100	100	100	100	100	
24	100	100	100	100	100	14.3	0
25	100	100	100	100	100	85.7	100
26	100	100	100	100	100	100	100
27	100	100	100	100	100	64.3	100
28	100	100	100	100	100	100	100
29	100	29.5	36.4	93.3	100	14.3	100
30	100	96.4	81.8	86.7	100	60.7	
31	100	100	100	100	100	100	100
32	100	100	100	100	100	100	100
33	100	100	100	100	100	100	100
34	100	100	100	93.3	100	14.3	97.1
35	95.8	96.4	90.9	100	100	96.4	100
36	100	36.4	63.6	100	100	57.1	
37	100	100	100	93.3	100	7.1	100
38	100	100	100	100	100	100	100
39	98.3	100	100	100	100	100	100
40	96	84.4	84.1	100	100	100	
41	100	100	63.6	100	100	42.9	100

Chapter 4 and 5

	Solving Systems by Graphing	Solving Systems by Substitution	Solving Systems by Elimination/ Addition	Problem Solving with Systems	Rules of Exponents	Polynomial Functions - Add - Subtract	Polynomial Functions- Add - Subtract 2	Negative Exponents and Scientific Notation	Division of Polynomials
Student number	Score	Score	Score	Score	Score	Score	Score	Score	Score
1	100	100	100	37.5	100	92.9	100	100	100
2	100	100	100	100	100	100	98.1	100	11.1
3	80	100	77.8	0	92.3	100	22.2	90	0
4	100	100	100	100	100	100	11.1	95	11.1
5	100	100	100	0	100	100	100	100	11.1
6	100	100	100		100	100	100	100	100
7	96.7	66.7	0		100	100	100	100	0
8	93.5	55.6	77.8		100	92.9	87	90	0
9	94.4	100	100	100	100	100	100	100	100
10	100	100	100	100	100	92.9	88.9	100	100
11	100	100	100	37.5	100	85.7	100	90	100
12	100	100	100		100	100	100	100	33.3
13	100	100	100		100	100	100	100	44.4
14	100	100	100	100		64.3	100	75	11.1
15	100	100	88.9	0	100	100	100	100	88.9
16	100	100	88.9		100	92.9	100	100	77.8
17	28.6	55.6	100	100		92.9	98.1	55	100

18	98.9	100	100	75	100	100	77.8	100	
19	100	100	77.8	100	100	100	100	100	33.3
20	87.5	88.9	77.8	25	100	100	100	100	11.1
21	100	100	100	100	100	100	100	100	
22	32.9	22.2	77.8		69.2	71.4	100	55	66.7
23	100	100	100		100	100	100	100	
24	100	88.9	88.9		100	100	100	100	77.8
25	98.9	100	100	0	100	92.9	33.3	55	
26	100	100	100	37.5	100	100	100	100	100
27	100	100	100		100	100	100	100	100
28	100	100	100	0	100	100	100	100	100
29	100	100	88.9	12.5	100	100	100	100	100
30	100	100	100	25	100	100	100	100	33.3
31	100	100	100		100	92.9	11.1	100	11.1
32	100	100	100		100	85.7	100	100	
33	100	100	100		100	100	100	100	100
34	100	100	66.7		100	100	100	100	66.7
35	94.9	88.9	100	100	100	96.4	100	95	100
36	90	0	100		100	50	0	15	
37	100	100	88.9		100	100	88.9	95	0
38	100	100	100	100	100	100	100	100	100
39	98.6	100	88.9		100	100	98.1	100	100
40	98.9	22.2	77.8	25	84.6	85.7	0	95	
41	100	88.9	55.6		53.8	100	100	100	0

Chapter 12 and 6

	Exponential Growth Functions	Greatest Common Factor	Factoring Polynomials Student number
Student number	12	6	6
1	Score	Score	Score
2	100	100	50
3	100	80	80
4	100	70	100
5	100	100	100
6	100	100	40
7	100	70	100
8	100	70	42.5
9	100	0	45
10	100	100	100
11	100	70	40
12	100	100	100
13	100	100	
14	100		40
15	100	20	
16	100	100	97.5
17	100	70	30
18	100	100	100
19	100	100	
20	100	0	100
21	100	30	
22	100	100	100
23	100	100	100
24			
25	100	100	90
26	100	100	100
27	100	100	100
28	100	80	
29	100	100	100
30	100	100	100
31	100	80	100
32	33.3	80	40
33	88.9		40
34	100	100	100
35	100	40	
36	100	100	40
37		70	
38	100	100	100
39	100	100	40

40	100	60	0
41	100	40	10

Test Group Data: MathXL

Quiz Assignments

Chapter 1

	Symbols and Sets of Numbers Quiz	Fraction Review Quiz	Variable Expressions and Equations Quiz	Operations with Real Numbers Quiz	Properties of Real Numbers Quiz
Student number	Score	Score	Score	Score	Score
1	100	90	80	93.3	80
2	100	100	100	100	100
3	87.5	70	70	80	50
4	100	100	90	100	100
5	100	100	100	100	100
6	81.3	50	80	86.7	90
7	100	80	60	46.7	50
8	93.8	80	80	86.7	90
9	93.8	80	90	100	90
10	100	100	90	100	100
11	100	100	100	100	100
12	100	100	100	100	100
13	100	90	100	100	100
14	100	90	80	93.3	100
15	100	80	80	93.3	100
16	87.5	90	80	86.7	90
17	100	90	50	80	50
18	100	100	100	100	80
19	87.5	90	80	100	100
20	100	90	80	93.3	90
21	100	100	100	100	100
22	87.5	100	60	93.3	90
23	100	90	100	100	90
24	87.5	80	90	93.3	100
25	100	80	90	100	100
26	100	90	90	100	100
27	75	70	60	100	100
28	100	100	90	93.3	100
29	100	80	80	86.7	100

30	100	100	100	100	100
31	100	100	100	100	100
32	100	90	90	93.3	90
33	100	100	100	100	100
34	100	90	100	93.3	90
35	87.5	60	50	73.3	50
36	87.5	80	100	80	
37					
38	100	100	100	100	100
39	87.5	90	90	100	100
40	100	90	70	80	70
41	100	80	80	86.7	90

Chapter 2

	Simplifying Algebraic Expressions Quiz	Addition and Multiplication Properties Quiz	Solving Linear Equations Quiz	Problem Solving Quiz	Formulas and Problem Solving Quiz	Percent Distance Mixture Interest Quiz	Linear Inequalities Quiz
Student number	Score	Score	Score	Score	Score	Score	Score
1	90	90	70	80	100		86.7
2	90		90	100	100		96.7
3	40	60	55	100	70		66.7
4	90	90	90	100	90		83.3
5	100	100	90	100	100		100
6	90	100	90	100	100		90
7	10		60	40	40		65
8	90	30	100	80	80		76.7
9	80	40	80	80	60		53.3
10	100	100	100	100	90		85
11	100	90	80	100	90	50	60
12	100	100	90	100	90		90
13	90	90	80	100	100		80
14	90	100	85	100	80		90
15	100	70	60	100	60	35	68.3
16	90	80	95	100	83.3		80
17	70		90	80	50		10
18	70	80	90	100	90		95
19	80	90	90	100	90	10	70
20	90	90	80	100	90		65
21	100	100	90	100	100		100
22	80			100	100		
23	90	90	80	100	100		96.7
24	100	100	90	100	100		100
25	100	80	90	100	100		83.3
26	90	90	90	93.3	100		100

27	100	100	100	100	100		93.3
28	90	90	100	100	100		100
29	80	80	65	100	50		96.7
30	100	90	100	100	100		48.3
31	100	90	80	100	100		100
32	70	80	60	80	100		90
33	100	100	90	93.3	100	95	90
34	100	100	100	80	90		100
35	60	30	90	100	100		60
36	60			80	50		
37			70	100	90		96.7
38	100	100	100	100	100		96.7
39	90	90	90	80	100	50	95
40	90		90	100	93.3		78.3
41	80		50	100	80		3.3

Chapter 3

	Reading Graphs and the Coordinate System Quiz	Graphing Linear Equations Quiz	Intercepts Quiz	Slope and Rate of Change Quiz	Slope Intercept Form Quiz	Point Slope Form Quiz	Function Quiz
Student number	Score	Score	Score	Score	Score	Score	Score
1	75	70	97.5	100	95	0	86.7
2	95	100	82.5	80	65	40	91.1
3	80	90	72.5	60	80	10	86.7
4	95	100	92.5	80	90	70	100
5	100	100	97.5	100	100		100
6	91.7	95	97.5	90	90	80	93.3
7	86.7	65	25	30			
8	100	90	92.5	50	80		93.3
9	69.2	90	65	80	75	80	91.1
10	95	100	97.5	80	90	90	100
11	100	85	95	80	100	40	86.7
12	100	95	97.5	100	100	90	86.7
13	100	100	90	90	100	90	93.3
14	95	65		90	70		73.3
15	100	100	95	80	85	60	73.3
16	90	90	100	90	85		
17	95	60	67.5	70	75	80	93.3
18	82.5	90	92.5	90	85	85	93.3
19	95	80	87.5	80	85		
20	95	100	92.5	100	75		

21	100	95	97.5	100	100	90	100
22	37.5				90		
23	90	100	92.5	90	100		
24	94.2	100	100	90	90		
25	100	95	95	100	100		93.3
26	100	100	87.5	90	100	80	93.3
27	91.7	90	90	100	85		93.3
28	100	100	100	100	100	45	100
29	95	45		40	65		100
30	100	100	87.5	90	85		
31	92.5	100	90	90	100	90	100
32	95	95	87.5	90	80	70	93.3
33	97.5	100	95	90	90	100	100
34	100	80	95	80	55		94.4
35	90	65	82.5	70	10		
36	100	95	92.5	100	100		
37	87.5	95	77.5	90	100	20	86.7
38	100	100	100	100	100		
39	81.7	100	100	100	100	90	100
40	84.2	100	95	80	100		
41	92.5	100	45	100	90		86.7

Chapter 4 and 5

	Solving Systems by Graphing Quiz	Solving Systems by Substitution Quiz	Solving Systems by Elimination/Addition Quiz	Rules of Exponents Quiz	Polynomial Functions-Add-Subtract Quiz	Negative Exponents and Scientific Notation Quiz
Student number	Score	Score	Score	Score	Score	Score
1	80	87.5	57.1	83.3	93.3	90
2	100	100	71.4	100	95.6	90
3	80	75	85.7	83.3	65.6	60
4	80	87.5	85.7	83.3	80	90
5	100	100	85.7	100	71.1	60
6	80	100	71.4	83.3	77.8	75
7	80	50	28.6	66.7	47.8	65
8	80	75	71.4	33.3	57.8	55
9	60	75	71.4	75	56.7	80
10	100	100	85.7	91.7	86.7	85
11	100	87.5	85.7	83.3	76.7	50
12	100	100	100	100	92.2	95
13	100	87.5	100	91.7	67.8	75
14	80		100	75	51.1	

15	90	75	100	75	70	60
16	80	75	85.7	83.3	86.7	65
17			85.7			
18	100	87.5	85.7	100	78.9	65
19	90	62.5	71.4	75	87.8	85
20	80			100	80	90
21	100	100	100	100	97.8	100
22	70	37.5	14.3	0	97.8	40
23	80	75	85.7	100	92.2	90
24	100	87.5		83.3	76.7	95
25	100	50	100	100	50	
26	100	87.5	71.4	100	80	80
27	100	100		91.7	64.4	80
28	100	87.5	100	100	92.2	90
29	100	87.5	85.7	100	92.2	80
30	100	62.5	85.7	100	82.2	85
31	100	87.5	100	100	97.8	100
32	100	50	42.9	91.7	56.7	70
33	100	87.5	100	91.7	100	100
34	100	87.5		91.7	47.8	85
35	100	75	85.7	75	56.7	60
36	100		85.7			
37	80	75	71.4	91.7	85.6	70
38	100	100	100	100	100	95
39	80	75		83.3	93.3	75
40	70	37.5	71.4	25		70
41	100	75		58.3	78.9	55

APPENDIX C: MATHXL HOMEWORK, QUIZZES, PROJECT CORRELATIONS AND SAMPLES

Topics created and implemented during the 2008-2009 school year

F08 - S09 Algebra I Martin-Gay, 3e

My Assignments

See all assignments

Homework and Tests

MathXL Homework Topics
Created by Darlene Ford

Order	**Ch.**		**Assignment Name**
1	1		Symbols and Sets of Numbers
2	1		Fraction Operations
3	1		Variable Expressions and Equations
4	1		Operations with Real Numbers
5	1		Properties of Real Numbers
12	2		Simplifying Algebraic Expressions
13	2		Addition and Multiplication Properties
14	2		Solving Linear Equations
15	2		Problem Solving
16	2		Formulas and Problem Solving
17	2		Solving w/ Percent/Distance/Mixtures/Interes
18	2		Linear Inequalities
26	3		Reading Graphs and the Coordinate System
27	3		Graphing Linear Equations
28	3		Intercepts
29	3		Slope and Rate of Change
30	3		Slope Intercept Form
31	3		Point Slope Form
32	3		Functions
40	4		Solving Systems by Graphing
41	4		Solving Systems by Substitution
42	4		Solving Systems by Elimination/ Addition
43	4		Problem Solving with Systems
48	5		Rules of Exponents
49	5		Polynomial Functions - Add - Subtract
50	5		Polynomial Functions- Add - Subtract 2
51	5		Multiplying Polynomials
52	5		Polynomial Special Products
53	5		Negative Exponents and Scientific Notation
54	5		Division of Polynomials
61	12		Exponential Growth Functions
63	6		Greatest Common Factor
64	6		Factoring Polynomials
67	7		Simplifying Rational Expressions
68	7		Solving Equations using Rational Expressions
69	7		Proportions/ Problem Solving with Rational Numbers
73	8		Graphing and Writing Functions (linear/non-linear)
74	8		Variation and Problem Solving
77	9		Compound Inequalities
78	9		Absolute Value Equations
79	9		Absolute Value Inequalities
80	9		Graphing Linear and Systems of Inequalities
85	10		Simplifying Radicals
87	11		Quadratic Equation and the Formula

MathXL Quiz Topics
Created by Darlene Ford

Order	Ch.	Assignment Name
6	1	Symbols and Sets of Numbers Quiz
7	1	Fraction Review Quiz
8	1	Variable Expressions and Equations Quiz
9	1	Operations with Real Numbers Quiz
10	1	Properties of Real Numbers Quiz
11	1	Connecting to Algebra / Properties of Real Numbers
19	2	Simplifing Algebraic Expressions Quiz
20	2	Addition and Multiplication Properties Quiz
21	2	Solving Linear Equations Quiz
22	2	Problem Solving Quiz
23	2	Formulas and Problem Solving Quiz
24	2	Percent Distance Mixture Interest Quiz
25	2	Linear Inequalities Quiz
33	3	Reading Graphs and the Coordinate System Quiz
34	3	Graphing Linear Equations Quiz
35	3	Intercepts Quiz
36	3	Slope and Rate of Change Quiz
37	3	Slope Intercept Form Quiz
38	3	Point Slope Form Quiz
39	3	Function Quiz
44	4	Solving Systems by Graphing Quiz
45	4	Solving Systems by Substitution Quiz
46	4	Solving Systems by Elimination/Addition Quiz
47	4	Problem Solving with Systems Quiz
55	5	Rules of Exponents Quiz
56	5	Polynomial Functions- Add- Subtract Quiz
57	5	Multiplying Polynomials Quiz
58	5	Polynomial Special Products Quiz
59	5	Negative Exponents and Scientific Notation Quiz
60	5	Division of Polynomials Quiz
62	12	Exponential Growth Functions Quiz
65	6	Greatest Common Factor Quiz
66	6	Factoring Polynomials Quiz
70	7	Simplifying Rational Expressions Quiz
71	7	Solving Equations using Rational Expressions Quiz
72	7	Proportions/ Problem Solving w/ rational #'s Quiz
75	8	Functions (linear/non-linear) Quiz
76	8	Variation and Problem Solving Quiz
81	9	Compound Inequalities Quiz
82	9	Absolute Value Equations Quiz
83	9	Absolute Value Inequalities Quiz
84	9	Graphing Linear and Systems of Inequalities Quiz
86	10	Simplifying Radicals Quiz
88	11	Quadratic Equations and the Formula Quiz

	Algebra I MathXL Project Correlations Text to Text		
#	***Topic and Objectives***	***Mc-Dougall***	***Martin Gay***
1	***Connection to Algebra***		
	Variables in Algebra	1.1	1.4
	Exponents and Powers	1.2	1.4
	Order of Operations	1.3	1.3
	Equations and Inequalities	1.4	1.2
	Problem Solving (translating)	1.5	1.4
	Tables and Graphs	1.6	3.1
	Introduction to Functions	1.7	3.7
2	***Properties of Real Numbers***		
	The Real Number Line	2.1	1.2
	Addition of Real Numbers	2.2	1.5
	Subtraction of Real Numbers	2.3	1.6
	Adding and Subtracting Matrices	2.4	
	Multiplication of Real Numbers	2.5	1.7
	Distributive Property	2.6	1.8
	Division of Real Numbers	2.7	1.7
	Probability and Odds	2.8	
3	***Solving Linear Equations***		
	Solving Equations using Addition and Subtraction	3.1	2.2
	Solving Equations using Multiplication and Division	3.2	2.2
	Solving Multi-step Equations	3.3	2.3
	Solving Equations with the Variable on Both Sides	3.4	2.3
	Linear Equations and Problem Solving	3.5	2.3-2.4
	Solving Decimal Equations	3.6	2.3
	Formulas and Functions	3.7	2.5-2.6

	Rate Ratio and Percents	3.8	2.6
4	***Graphing Linear Equations and Functions***		
	Coordinates and Scatter Plots	4.1	3.1
	Graphing Linear Equations	4.2	3.2
	Graphing Intercepts	4.3	3.3
	Slope of A Line	4.4	3.4
	Direct Variation	4.5	3.4/8.4
	Graphs from Slope Intercept form	4.6	3.2
	Solving Linear Equations Using Graphs	4.7	3.2
	Functions and Relations	4.8	3.7
5	***Writing Linear Equations***		
	Writing Linear Equations in Slope Intercept Form	5.1	3.5
	Writing Linear Equations given the Slope and a Point	5.2	3.6
	Writing Linear Equations given two Points	5.3	3.6
	Fitting a Line to Data: Exploring Data and Statistics	5.4	
	Point Slope of a Linear Equation	5.5	3.6
	Standard Form of a Linear Equation	5.6	3.2
6	***Solving and Graphing Linear Inequalities***		
	Solving One Step Linear Inequalities	6.1	2.7
	Solving Multi-Step Linear Inequalities	6.2	2.7
	Solving Compound Inequalities	6.3	2.7/9.1
	Solving Absolute-Value Equations and Inequalities	6.4	9.2/9.3
	Graphing Inequalities in Two Variables	6.5	9.4
	Stem and Leaf Plots and Mean Median and Mode Exploring Data and Statistics	6.6	
	Box and Whisker -Exploring Data and Statistics	6.7	
7	***System of Linear Equations and Inequalities***		
	Solving Linear System by Graphing	7.1	4.1
	Solving Linear System by Substitution	7.2	4.2

	Solving Linear System by Linear Combination	7.3	4.3
	Application of Linear Systems	7.4	4.1-4.3
	Special Types of Linear Systems	7.5	4.1
	Solving Systems of Linear Inequalities	7.6	9.4
8	***Exponent and Exponential Functions***		
	Multiplication Properties of Exponents	8.1	5.1
	Zero and Negative Exponents	8.2	5.1
	Division Property of Exponents	8.3	5.1
	Scientific Notation: Exploring Data and Statistics	8.4	5.5
	Exponential Growth Functions	8.5	12.1/12.2
	Exponential Decay Functions	8.6	12.1/12.2
9	***Quadratic Equations and Functions***		
	Solving Quadratic Equations by Finding Square Roots	9.1	11.1
	Simplifying Radicals	9.2	10.3
	Graphing quadratic functions	9.3	11.2
	Solving Quadratic Equations by Graphing	9.4	11.5-11.6
	Solving Quadratic Equations by the Quadratic Formula	9.5	11.2 -11.3
	Applications of the Discriminant	9.6	11.2
	Graphing Quadratic Inequalities	9.7	11.4
	Comparing Linear, Exponential, and Quadratic Models	9.8	11.5
10	***Polynomials and Factoring***		
	Adding and Subtracting Polynomials	10.1	5.2
	Multiplying Polynomials	10.2	5.3
	Special Products of Polynomials	10.3	5.4
	Solving Polynomial Equations in Factored Form	10.4	6.5
	Factoring x2 + bx + c	10.5	6.2
	Factoring ax2 + bx + c	10.6	6.3
	Factoring Special Products	10.7	6.4

	Factoring Using the Distributive Property	10.8	6.1
11	***Rational Equations and Functions***		
	Ratio and Proportion	11.1	7.6
	Percents	11.2	2.6
	Direct and Inverse Variation	11.3	8.4
	Simplifying Rational Expressions	11.4	7.1
	Multiplying and Dividing Rational Expressions	11.5	7.2
	Adding and Subtracting Rational Expressions	11.6	7.3-7.4
	Dividing Polynomials	11.7	5.6
	Rational Equations and Functions	11.8	7.1
12	***Radicals and Connections to Geometry***		
	Square-Root Functions	12.1	10.1
	Operations with Radical Expressions	12.2	10.2/10.4
	Solving Radical Equations	12.3	10.3/10.5
	Completing the Square	12.4	10.6
	The Pythagorean Theorem and Its Converse	12.5	10.6
	The Distance and Midpoint Formulas	12.6	13.1
	Trigonometric Ratios	12.7	
	Logical Reasoning: Proof	12.8	

Algebra I MathXL Project Correlations

Martin-Gay to Grade 9-Grade Level Expectation Table 5.4 Text to GLE's

Order	Ch.		Assignment Name	GLE's
1	1		Symbols and Sets of Numbers	1, 2, 15
2	1		Fraction Operations	1, 4, 5, 8
3	1		Variable Expressions and Equations	1, 2, 4, 8, 15
4	1		Operations with Real Numbers	1, 2, 4, 5, 8, 12, 15
5	1		Properties of Real Numbers	5, 8, 11
12	2		Simplifying Algebraic Expressions	2, 5, 8, 12
13	2		Addition and Multiplication Properties	5, 8, 11, 15
14	2		Solving Linear Equations	1, 4, 5, 8, 11
15	2		Problem Solving	5, 8, 11
16	2		Formulas and Problem Solving	5, 8, 9, 15
17	2		Solving w/ Percent/Distance/Mixtures/Interest	5, 8, 9, 10, 11, 15
18	2		Linear Inequalities	5, 8, 9, 11, 14
26	3		Reading Graphs and the Coordinate System	5, 8, 9, 14, 15, 23, 28, 29
27	3		Graphing Linear Equations	5, 8, 10, 13, 14, 15, 24, 25, 36, 37, 38, 40
28	3		Intercepts	5, 8, 10, 12, 13, 14, 15, 23
29	3		Slope and Rate of Change	5, 8, 9, 15, 23, 24, 25, 37, 38
30	3		Slope Intercept Form	5, 8, 13, 14, 15, 24, 25, 35, 36, 37
31	3		Point Slope Form	5, 8, 10, 15, 35, 36, 37
32	3		Functions	2, 5, 8, 35, 36
40	4		Solving Systems by Graphing	13, 14, 15, 16, 23, 25, 36, 37, 38, 39
41	4		Solving Systems by Substitution	5, 8, 12, 15, 16, 36, 37, 38, 39

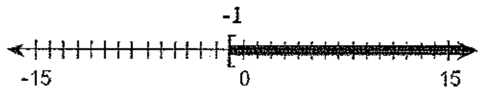
42	4		Solving Systems by Elimination/ Addition	5, 8, 15, 16, 36, 37, 38, 39
43	4		Problem Solving with Systems	5, 7, 8, 10, 11, 15, 16, 36, 37
48	5		Rules of Exponents	2, 8, 12
49	5		Polynomial Functions - Add - Subtract	2, 5, 8, 10
50	5		Polynomial Functions- Add - Subtract 2	2, 5, 8, 15
51	5		Multiplying Polynomials	2, 5, 8, 11, 15
52	5		Polynomial Special Products	2, 5, 8, 11, 15
53	5		Negative Exponents and Scientific Notation	2, 3, 5, 8
54	5		Division of Polynomials	2, 3, 5, 8, 11, 15
61	12		Exponential Growth Functions	2, 3, 5, 8, 10, 11, 15, 29, 36
63	6		Greatest Common Factor	2, 5
64	6		Factoring Polynomials	2, 5, 8, 11, 15
67	7		Simplifying Rational Expressions	2, 5, 8, 11, 12, 15, 21
68	7		Solving Equations using Rational Expressions	5, 8
69	7		Proportions/ Problem Solving with Rational Numbers	5, 7, 8, 11, 15, 21
73	8		Graphing and Writing Functions (linear/non-linear)	2, 5, 7, 8, 13, 15, 24, 25, 40
74	8		Variation and Problem Solving	2, 5, 7, 8, 9, 11, 15
77	9		Compound Inequalities	5, 8, 23
78	9		Absolute Value Equations	5, 8
79	9		Absolute Value Inequalities	5, 8, 23
80	9		Graphing Linear and Systems of Inequalities	5, 8, 14, 16, 24, 25, 36, 37, 38, 39
85	10		Simplifying Radicals	2, 5, 6, 8, 9, 15, 21
87	11		Quadratic Equation and the Formula	2, 5, 8

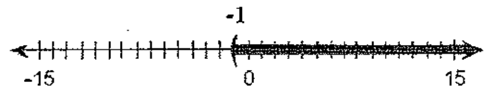
Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Linear Inequalities
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

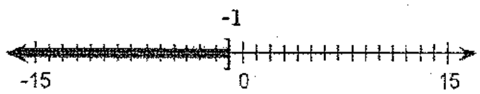
1. Graph the inequality on a number line. Then, write the solution in interval notation.

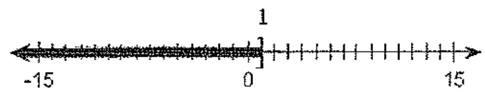
$x \geq -1$

Choose the correct answer below.

○ A.


○ B.


○ C.


○ D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

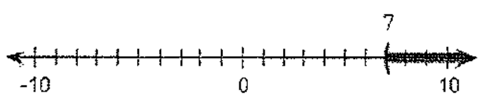
2. Solve the inequality. Graph the solution set, and write it in interval notation.

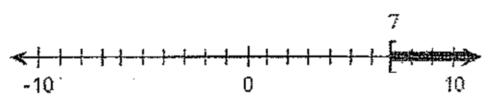
$2x > 14$

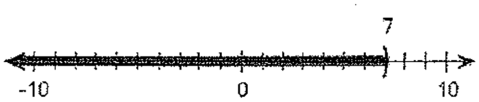
Solve the inequality.

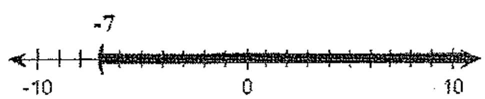
☐ (Type an inequality.)

Graph the solution set.

○ A.


○ B.


○ C.


○ D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

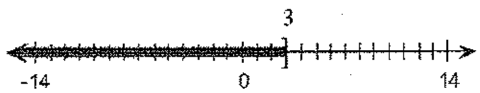
3. Solve the inequality. Graph the solution set, and write it in interval notation.

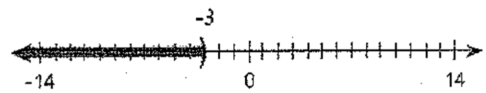
$x + 2 \leq -1$

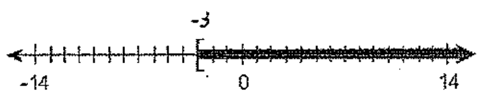
Solve the inequality.

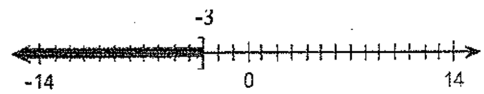
☐ (Type an inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution using interval notation.

☐ (Type your answer in interval notation.)

---

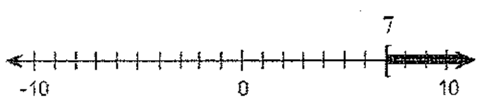
4. Solve the inequality. Graph the solution set, and write it in interval notation.

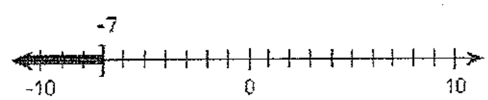
$-3x \leq 21$

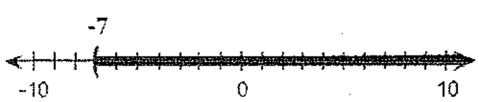
Solve the inequality.

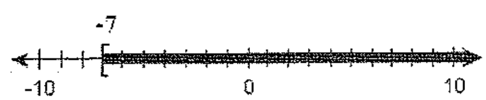
☐ (Type an inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Linear Inequalities
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

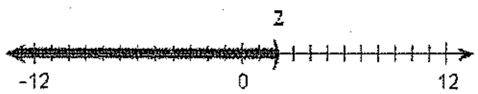
5. Solve the inequality. Graph the solution set, and write it in interval notation.

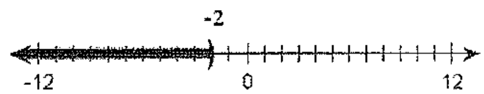
$8x + 4 < 7x + 2$

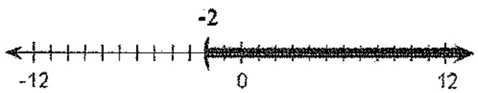
Solve the inequality.

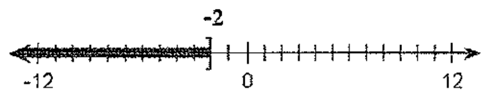
☐ (Type an inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

---

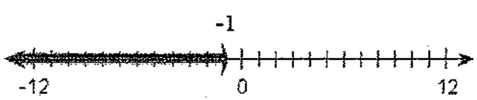
6. Solve the inequality. Graph the solution set, and write it in interval notation.

$x + 7 < 6(x + 2)$

Solve the inequality.

☐ (Type an inequality.)

Graph the solution set.

○A.


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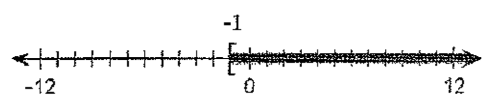

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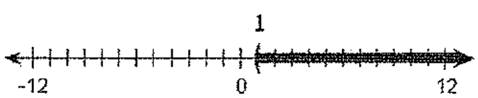
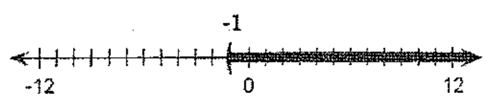


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Linear Inequalities
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

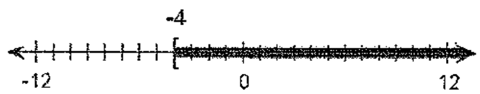
7. Solve the inequality. Graph the solution set, and write it in interval notation.

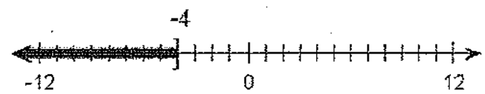
$-8x + 4 \geq 6(2 - x)$

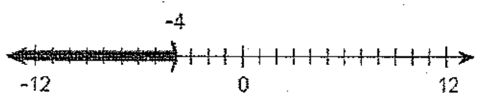
Solve the inequality.

☐ (Type an inequality.)

Graph the solution set.

○ A.


○ B.


○ C.


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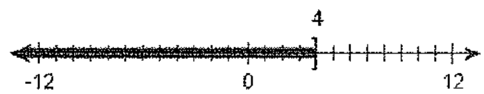


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

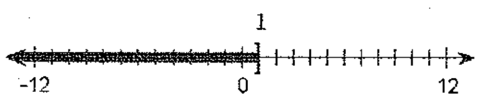
8. Solve the inequality. Graph the solution set, and write it in interval notation.

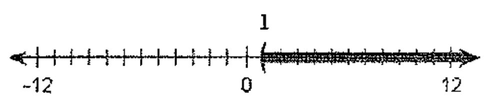
$2(x + 3) - 6 < -2(x - 4) - 4$

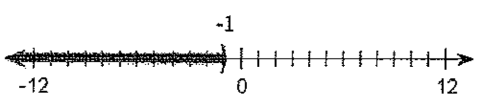
Solve the inequality.

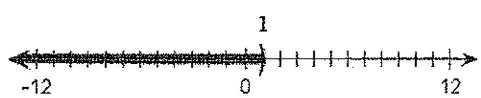
☐ (Type an inequality.)

Graph the solution set.

○ A.


○ B.


○ C.


○ D.


Write the answer in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

9. Solve the inequality. Graph the solution set, and write it in interval notation.

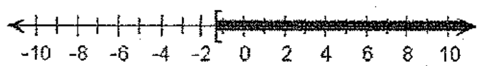
$$\frac{3}{4}x > -1$$

Solve the inequality.

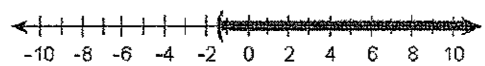
☐ (Type an inequality.)

Graph the solution set.

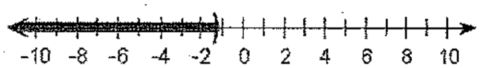
○ A.



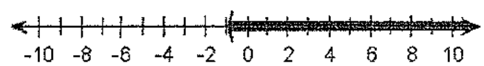
○ B.



○ C.



○ D.



Write the solution in interval notation.

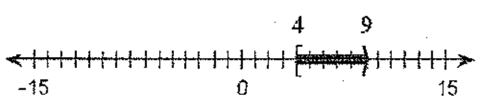
☐ (Type your answer in interval notation.)

10. Graph the inequality on a number line. Then, write the solution in interval notation.

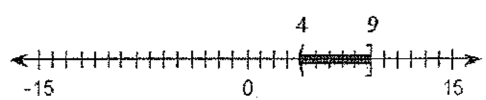
$$4 < y \leq 9$$

Graph the solution set.

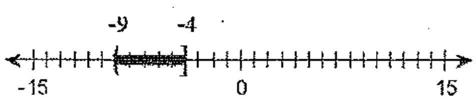
○ A.



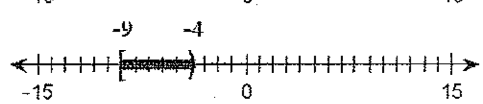
○ B.



○ C.



○ D.



Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

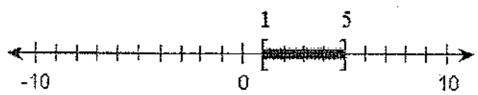
11. Solve the inequality. Graph the solution set, and write it in interval notation.

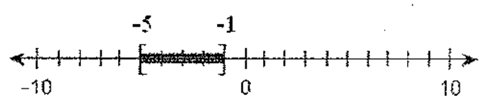
$$-1 \leq 2x - 3 \leq 7$$

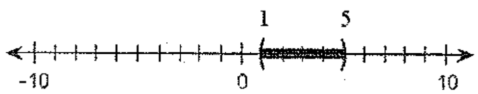
Solve the inequality.

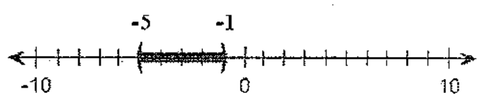
☐ (Type a compound inequality.)

Graph the solution set.

○A. 

○B. 

○C. 

○D. 

Write the solution in interval notation.

☐ (Type your answer in interval notation.)

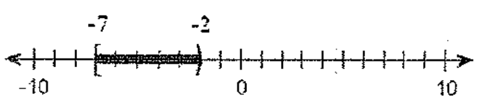
12. Solve the inequality. Graph the solution set, and write it in interval notation.

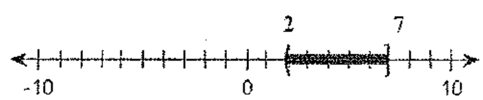
$$0 < 4(x-2) \leq 20$$

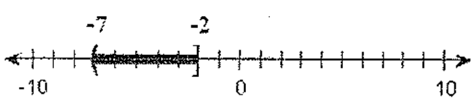
Solve the inequality.

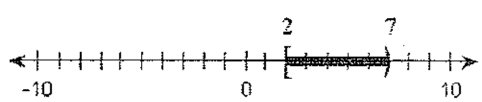
☐ (Type a compound inequality.)

Graph the solution.

○A. 

○B. 

○C. 

○D. 

Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

13. Six more than twice a number is greater than negative fourteen. Find all numbers that make this statement true.

The answer is ☐. (Type an inequality.)

14. Steve and Michelle Neely are celebrating their 30th anniversary by having a reception at a local reception hall. They have budgeted \$5,000 for their reception. If the reception hall charges a \$70 cleanup fee plus \$33 per person, find the greatest number of people that they may invite and still stay within their budget.

☐ people

15. George earns \$900 per month plus 3% of all his sales over \$1,000. Find the minimum sales that will allow George to earn at least \$3,600 per month.

\$☐.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

1. A
   $[-1, \infty)$

---

2. $x > 7$
   A
   $(7, \infty)$

---

3. $x \le -3$
   D
   $(-\infty, -3]$

---

4. $x \ge -7$
   D
   $[-7, \infty)$

---

5. $x < -2$
   B
   $(-\infty, -2)$

---

6. $x > -1$
   D
   $(-1, \infty)$

---

7. $x \le -4$
   B
   $(-\infty, -4]$

---

8. $x < 1$
   D
   $(-\infty, 1)$

---

9. $x > -\frac{4}{3}$
   B
   $\left(-\frac{4}{3}, \infty\right)$

---

10. B
    $(4, 9]$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities

11. $1 \le x \le 5$
A
$[1, 5]$

---

12. $2 < x \le 7$
B
$(2, 7]$

---

13. $x > -10$

---

14. 149

---

15. 91,000

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Addition and Multiplication Properties Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Solve the equation for x.

$$8x + \frac{7}{9} = \frac{1}{9}$$

x = ☐ (Simplify your answer.)

2. Solve the equation for x.

$$6x + 6 + 7x = 5x + 9x$$

x = ☐ (Simplify your answer.)

3. Two numbers have a sum of 20. If one number is p, express the other number in terms of p.

The answer is ☐.

4. Solve the equation for a.

$$\frac{a}{5} = 6$$

a = ☐

5. Solve the equation for y.

$$7y - 3 = 8y$$

y = ☐

6. Solve the equation for x.

$$2 - 5x - 2 - 5x = -10$$

x = ☐

7. Solve the equation for x.

$$\frac{9}{7}x = -18$$

x = ☐

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Addition and Multiplication Properties Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

8. Solve the equation for z.

$$5(z-2)=8+6z$$

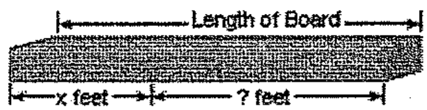
$z = \square$

9. Solve the equation for x.

$$-x+2=-25$$

$x = \square$

10. A 9-foot board is cut into two pieces. If one piece is x feet long, express the other length in terms of x.



$\square$ ft

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Addition and Multiplication Properties Quiz

1. $-\frac{1}{12}$

2. 6

3. $20 - p$

4. 30

5. -3

6. 1

7. -14

8. -18

9. 27

10. $9 - x$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions Quiz

1. Simplify the expression

$$-3y+0.9-2.4y+0.7y-5$$

$-3y+0.9-2.4y+0.7y-5=\square$

---

2. Write the following as an algebraic expression.

Add $5y-6$ to $10y-5$.

The answer is $\square$. (Simplify your answer.)

---

3. Simplify the expression. First, use the distributive property to remove any parentheses.

$$8(z-6)$$

$8(z-6)=\square$

---

4. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

Four-sevenths of a number, increased by fifteen

The answer is $\square$.

---

5. Simplify the expression by combining any like terms.

$$-1.9w + 0.9w$$

$-1.9w + 0.9w=\square$

---

6. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

the sum of 2 times a number and -3, added to 2 times a number

The answer is $\square$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions Quiz

7. Simplify the expression.

$$-4y^2+7y^2-8y^2$$

$-4y^2+7y^2-8y^2=\square$

8. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

Triple a number, minus the sum of the number and three

The answer is $\square$.

9. Simplify the expression.

$$-3(2z-2)-4(3z+4)$$

$-3(2z-2)-4(3z+4)=\square$

10. Simplify the expression.

$$2.5(-5y-4)+2.2y$$

$2.5(-5y-4)+2.2y=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions Quiz

1. $-4.7y - 4.1$

2. $15y - 11$

3. $8z - 48$

4. $\frac{4}{7}x + 15$

5. $-w$

6. $4x - 3$

7. $-5y^2$

8. $2x - 3$

9. $-18z - 10$

10. $-10.3y - 10$

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Solving Linear Equations Quiz
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Using x as the unknown number, write the statement below as an equation.

   The sum of twice a number and 8 is equal to the sum of the number and 6.

   Choose the equation that represents the given sentence.

   ○ A. $2(x+8)=x+6$

   ○ B. $8(x+2)=x+6$

   ○ C. $8x+2=x+6$

   ○ D. $2x+8=x+6$

   Solve the equation for x.

   $x=\square$

2. Solve the equation for x.

   $$\frac{2}{9}x-\frac{1}{3}=1$$

   $x=\square$ (Type an integer or a fraction. Simplify your answer.)

3. Solve the equation for c.

   $$2(5c-2)-2=6c+6$$

   $c=\square$

   (Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

4. Solve the equation for x.

   $$3x-5=3(x+7)$$

   $x=\square$

   (Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Linear Equations Quiz

5. Solve the equation for x.

$$4(x-3)+6=6x-2(5+x)$$

$x=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

6. Solve the equation for x.

$$5(x+7)-6=29$$

$x=\square$ (Type an integer or a fraction. Simplify your answer.)

---

7. Solve the equation for x.

$$8x+\frac{3}{2}=9x-\frac{3}{2}$$

$x=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

8. Solve the equation for n.

$$8(2n-5)=(2n+3)+6$$

$n=\square$ (Type an integer or a fraction. Simplify your answer.)

---

9. Solve the equation for x.

$$0.60x+0.15(170)=0.30(89)$$

$x=\square$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Solving Linear Equations Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. Using x as the unknown number, write the statement below as an equation.

Four times a number, minus 5, is equal to three times the number, plus 4.

Choose the equation that represents the given sentence.

○ A. $(4-5)\cdot x=(3+4)\cdot x$

○ B. $4x-5=3x+4$

○ C. $4\cdot 5-x=3\cdot 4+x$

○ D. $4(x-5)=3(x+4)$

Solve the equation for x.

$x=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Linear Equations Quiz

1. D
   -2

2. 6

3. 3

4. N

5. N

6. 0

7. 3

8. $\frac{7}{2}$

9. 2

10. B
    9

Student: ______	**Instructor:** Darlene Ford	**Assignment:** Formulas and Problem Solving Quiz
Date: ______	**Course:** Algebra I Martin-Gay	
Time: ______	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Solve the formula for the specified variable.

$D=\frac{1}{5}fk$ for f

$f=\square$

2. Substitute the given values into the formula, and solve for the unknown variable.

$A=bh;\ A=40,\ h=10$

$b=\square$

3. The length of a rectangular yard is 9 meters. If 28 meters of fencing are required to fence the yard, find its width.

$W=\square$ meters (Type an integer or a decimal.)

4. A flower bed is in the shape of a triangle with one side twice the length of the shortest side, and the third side is 17 feet more than the length of the shortest side. Find the dimensions if the perimeter is 161 feet.

$a=\square$ ft (shortest side)

$b=\square$ ft (second side)

$c=\square$ ft (third side)

5. Solve the formula for the specified variable.

$A=P+PRT$ for R

$R=\square$

6. Substitute the given values into the formula, and solve for the unknown variable.

$A=\frac{1}{2}h(B+b);\ A=36,\ B=2,\ b=7$

$h=\square$

7. The length of a rectangular parking lot is 4 meters less than twice its width, and the perimeter is 442 meters, find the length of the parking lot.

$L=\square$ meters

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Formulas and Problem Solving Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

8. Solve the formula for the specified variable.

$V = ZPK$ for Z

Z = $\square$

9. Convert $-31°$ Fahrenheit to Celsius.

C = $\square$°

10. Lombardi's pizza sells one 18-inch cheese pizza or two 11-inch cheese pizzas for $12.99. Determine which size gives more pizza.

- ○ the 11-inch pizzas
- ○ the 18-inch pizza

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Formulas and Problem Solving Quiz

1. $\frac{5D}{k}$

2. 4

3. 5

4. 36
   72
   53

5. $\frac{A-P}{PT}$

6. 8

7. 146

8. $\frac{V}{PK}$

9. -35

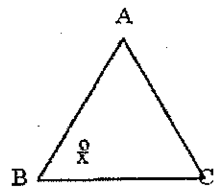
10. the second choice

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Problem Solving Quiz

1. Recall that the sum of the measures of the angles of a triangle is 180°. In the triangle to the right, angle C has the same measure as angle B, and angle A measures 36° less than angle B. Find the measure of each angle.



angle A = ☐ degrees

angle B = ☐ degrees

angle C = ☐ degrees

2. The left and right page numbers of an open book are two consecutive integers whose sum is 283. Find these page numbers.

The smaller page number is ☐.

The larger page number is ☐.

3. A 30-inch board is to be cut into three pieces so that the second piece is twice as long as the first piece and the third piece is 3 times as long as the first piece. If x represents the length of the first piece, find the lengths of all three pieces.

The first piece is ☐ inches long.

The second piece is ☐ inches long.

The third piece is ☐ inches long.

4. A car rental agency advertised renting a car for $24.95 per day and $0.34 per mile. If Greg rents this car for 3 days, how many whole miles can he drive on a $200 budget?

☐ miles (Round down to the nearest whole mile.)

Student: ____________________ **Date:** ____________________ **Time:** ____________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving Quiz

5. A 15-foot piece of string is cut into two pieces so that one piece is 3 feet longer than twice the shorter piece. If the shorter piece is x feet long, find the lengths of both pieces.

The shorter piece is ☐ feet long.

The longer piece is ☐ feet long.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving Quiz

1. 36
   72
   72

---

2. 141
   142

---

3. 5
   10
   15

---

4. 368

---

5. 4
   11

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Percent Distance Mixture Interest Quiz

1. How much pure acid should be mixed with 5 gallons of a 50% acid solution in order to get a 60% acid solution?

   ☐ gallons (Round to two decimal places.)

2. The number of fraud complaints rose from 270,000 in 1998 to 440,000 in 1999. Find the percent increase.

   ☐% (Round to the nearest whole percent.)

3. The Comfort Coffee Company wants to mix 30 pounds of their Smooth blend worth $3 a pound with their Special blend worth $5 a pound in order to create a new blend of coffee worth $3.50 a pound. How many pounds of the Special blend should be added to the Smooth blend?

   ☐ pounds (Round to two decimal places.)

4. Find last year's salary if, after a 6% pay raise, this year's salary is $40,810.

   $☐

5. A housewife earns extra money by making and selling jewelry. Leslie bought earrings from her and later sold them for a 25% profit. If she sold them for $40, how much did Leslie pay for the earrings?

   $☐

6. The Smith family drove to the state park at 55 miles per hour and returned on the same route at 50 mph. Find the distance to the state park if the total driving time was 4.2 hours.

   ☐ miles

7. How can $55,000 be invested, part at 6% annual simple interest and the remainder at 10% annual simple interest, so that the interest earned by the two accounts will be equal?

   The amount to invest at 6% is $☐. (Round to the nearest cent.)

   The amount to invest at 10% is $☐. (Round to the nearest cent.)

Student: ______________	Instructor: Darlene Ford	Assignment: Percent Distance Mixture Interest Quiz
Date: ______________	Course: Algebra I Martin-Gay	
Time: ______________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

8. Susan Marciano invested part of her \$35,000 bonus in a fund that paid a 10% profit and invested the rest in stock that suffered a 5% loss. Find the amount of each investment if her overall net profit was \$2,900.

The amount invested at 10% is \$☐.

The amount invested in stock is \$☐.

9. Larry Mitchell invested part of his \$38,000 advance at 2% annual simple interest and the rest at 5% annual simple interest. If his total yearly interest from both accounts was \$1,750, find the amount invested at each rate.

The amount invested at 2% is \$☐.

The amount invested at 5% is \$☐.

10. Dennis and Chris Reed leave simultaneously from the same point hiking in opposite directions, Dennis walking at 3 miles per hour and Chris at 4 mph. How long can they talk on their walkie-talkies if the walkie-talkies have a 15 mile radius?

☐ hrs (Round to one decimal place.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Percent Distance Mixture Interest Quiz

1. 1.25

2. 63

3. 10.00

4. 38,500

5. 32

6. 110

7. 34,375.00
   20,625.00

8. 31,000
   4,000

9. 5,000
   33,000

10. 2.1

Student: ____________________ **Instructor:** Darlene Ford **Assignment:** Linear Inequalities Quiz
Date: ____________________ **Course:** Algebra I Martin-Gay
Time: ____________________ **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e

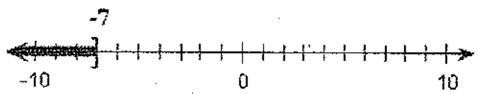
1. Solve the inequality. Graph the solution set, and write it in interval notation.

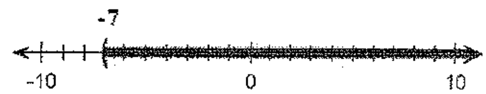
$$-5x \le 35$$

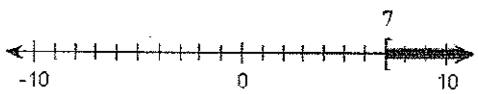
Solve the inequality.

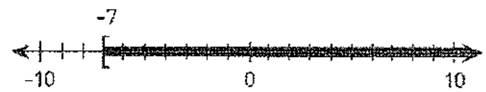
☐ (Type an inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

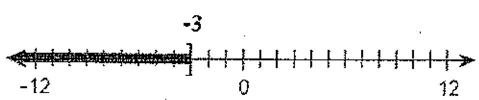
2. Solve the inequality. Graph the solution set, and write it in interval notation.

$$3x - 4 < 2x - 7$$

Solve the inequality.

☐ (Type an inequality.)

Graph the solution set.

○A.


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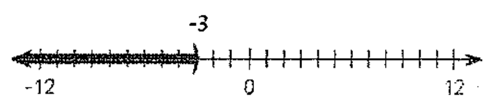

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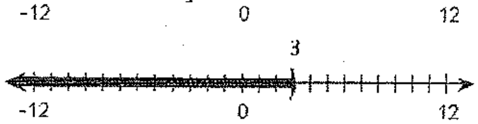

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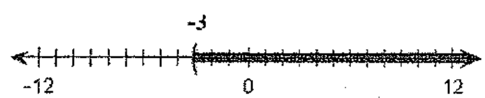


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Linear Inequalities Quiz

3. Six more than twice a number is greater than negative twelve. Find all numbers that make this statement true.

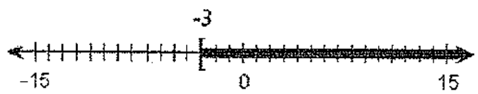
The answer is ☐. (Type an inequality.)

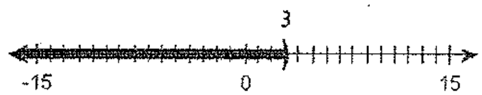
---

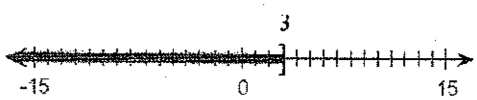
4. Graph the inequality on a number line. Then, write the solution in interval notation.

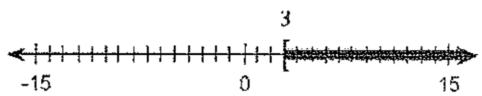
$x \leq 3$

Choose the correct answer below.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

---

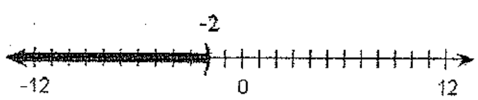
5. Solve the inequality. Graph the solution set, and write it in interval notation.

$2(x+1)-2<-4(x-2)+4$

Solve the inequality.

☐ (Type an inequality.)

Graph the solution set.

○A.


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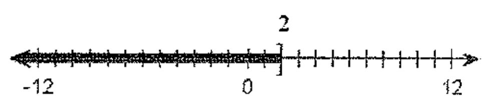

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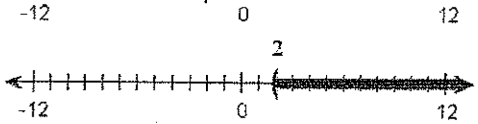
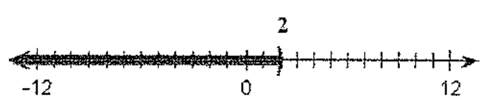


○D.


Write the answer in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________________
Date: ____________________
Time: ____________________

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Assignment: Linear Inequalities Quiz

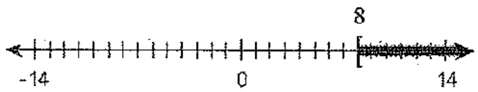
6. Solve the inequality. Graph the solution set, and write it in interval notation.

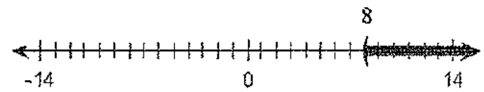
$x - 5 \geq 3$

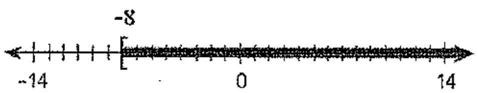
Solve the inequality.

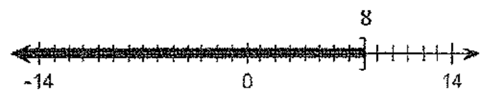
☐ (Type an inequality.)

Graph the solution set.

○ A.


○ B.


○ C.


○ D.


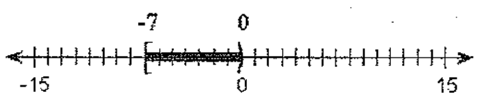
Write the solution using interval notation.

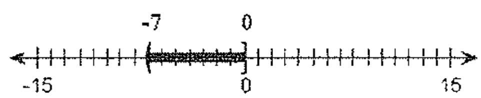
☐ (Type your answer in interval notation.)

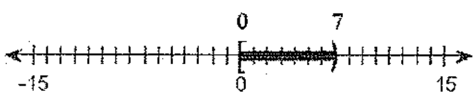
7. Graph the inequality on a number line. Then, write the solution in interval notation.

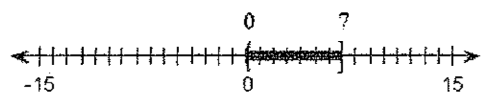
$-7 < y \leq 0$

Graph the solution set.

○ A.


○ B.


○ C.


○ D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Linear Inequalities Quiz

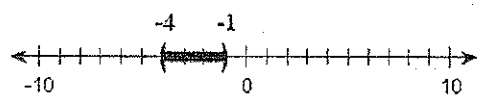
8. Solve the inequality. Graph the solution set, and write it in interval notation.

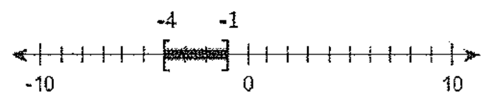
$2 \leq 4x - 2 \leq 14$

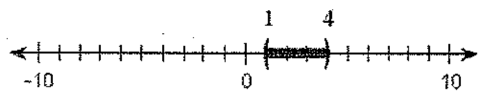
Solve the inequality.

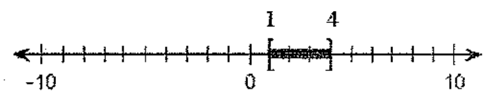
☐ (Type a compound inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

---

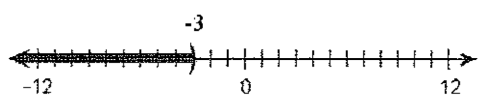
9. Solve the inequality. Graph the solution set, and write it in interval notation.

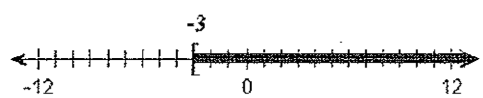
$-4x + 2 \geq 2(4 - x)$

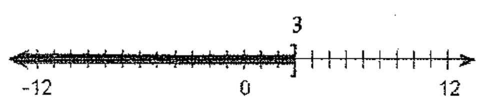
Solve the inequality.

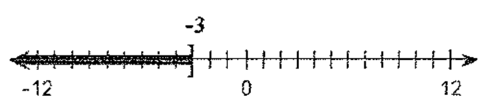
☐ (Type an inequality.)

Graph the solution set.

○A.


○B.


○C.


○D.


Write the solution in interval notation.

☐ (Type your answer in interval notation.)

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Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. Oscar and Julie Ashton are celebrating their 15th anniversary by having a reception at a local reception hall. They have budgeted \$4,500 for their reception. If the reception hall charges a \$90 cleanup fee plus \$32 per person, find the greatest number of people that they may invite and still stay within their budget.

☐ people

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1. $x \geq -7$
   D
   $[-7, \infty)$

---

2. $x < -3$
   B
   $(-\infty, -3)$

---

3. $x > -9$

---

4. C
   $(-\infty, 3]$

---

5. $x < 2$
   D
   $(-\infty, 2)$

---

6. $x \geq 8$
   A
   $[8, \infty)$

---

7. B
   $(-7, 0]$

---

8. $1 \leq x \leq 4$
   D
   $[1, 4]$

---

9. $x \leq -3$
   D
   $(-\infty, -3]$

---

10. 137

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System

1. The bar graph at the right shows the top 10 tourist destinations and the number of tourists that visit each country per year.

Which countries have more than 60 million tourists per year?

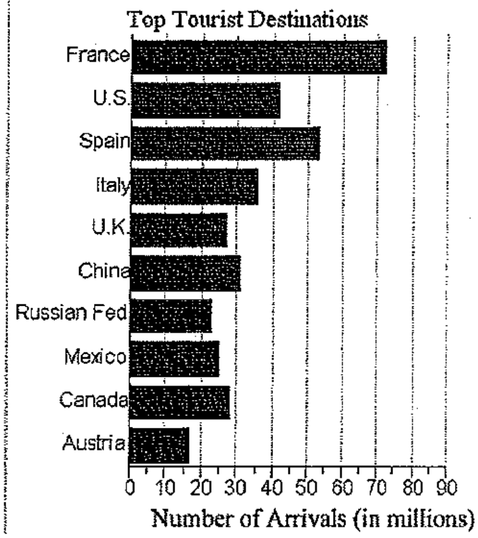
Choose the answer that lists *all* countries having more than 60 million tourists.

○A. France, Italy

○B. France, China

○C. France, Spain

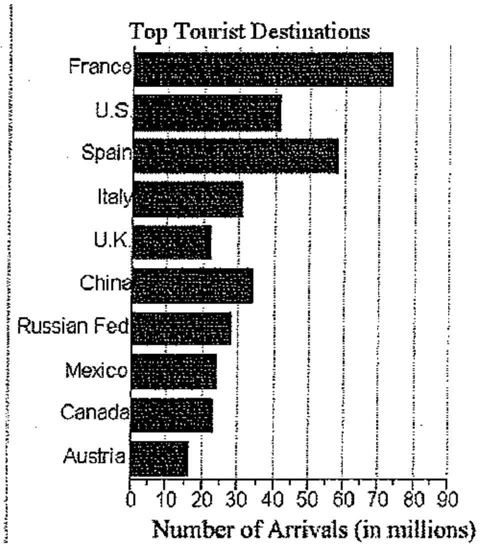
○D. France



2. The bar graph to the right shows the top 10 countries that tourists visit each year.

Estimate the number of tourists per year whose destination is Canada.

According to the graph, ☐ million tourists visit Canada each year.



Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
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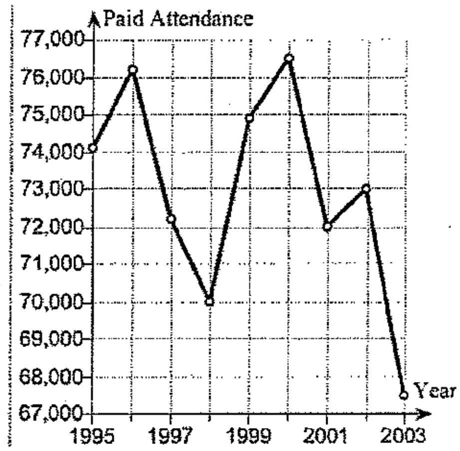
Assignment: Reading Graphs and the Coordinate System

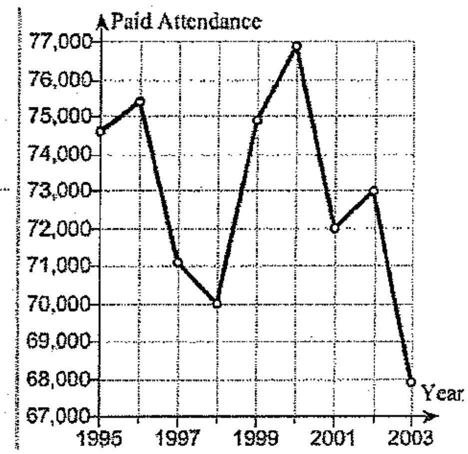
3. The line graph shown to the right shows the attendance at each Super Bowl game from 1995 through 2003. Estimate the Super Bowl attendance in 1995.

Source: NFL



The Super Bowl attendance in 1995 was ☐. (Round to the nearest hundred.)

4. The line graph shown to the right shows the attendance at each championship football game from 1995 through 2003. Find the year on the graph with the greatest attendance, and approximate the attendance.

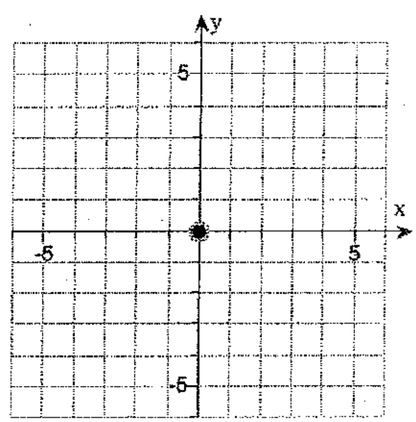


The year with the greatest attendance is ☐.

The approximate attendance was ☐. (Round to the nearest hundred.)

5. Plot the ordered pair $(-4,-2)$. State in which quadrant, if any, the point lies

Plot the ordered pair on the graph to the right.



Which quadrant does the point lie in?

- ○ I
- ○ III
- ○ II
- ○ IV
- ○ None of these

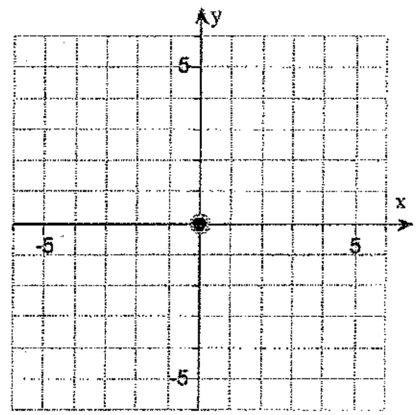
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System

6. Plot the ordered pair (2,0). State in which quadrant, if any, the point lies.

Plot the ordered pair on the graph to the right.

Which quadrant does the point lie in?

- ○ I
- ○ II
- ○ III
- ○ IV
- ○ None of these

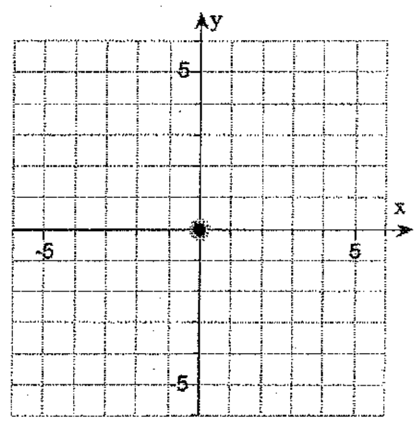


7. Plot the ordered pair (0,3). State in which quadrant, if any, the point lies.

Plot the ordered pair on the graph to the right.

Which quadrant does the point lie in?

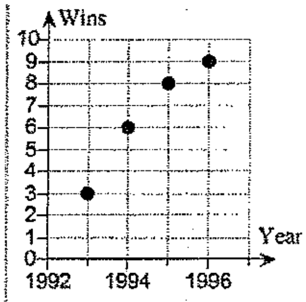
- ○ I
- ○ II
- ○ III
- ○ IV
- ○ None of these



Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System

8. The following table gives the number of games won by a high school football team during the years shown.

Year	Wins
1993	3
1994	6
1995	8
1996	9



(a) Write each pair of data as an ordered pair of the form (year, wins).

What is the ordered pair that corresponds to the first row of data given in the table?

☐

What is the ordered pair that corresponds to the second row of data given in the table?

☐

What is the ordered pair that corresponds to the third row of data given in the table?

☐

What is the ordered pair that corresponds to the fourth row of data given in the table?

☐

(b) Create a scatter diagram of the paired data on the grid given above.

Plot the point (1993,3).

Plot the point (1994,6).

Plot the point (1995,8).

Plot the point (1996,9).

(c) What trend in the paired data does the scatter diagram show? Did the number of games won by the high school football team increase or decrease over the years 1993 – 1996?

8. (cont.)

○ Increase

○ Decrease

The number of games won by the high school football team increased over the years 1993 − 1996.

---

9. Determine whether each ordered pair is a solution of $y = -6x$.

Is $(-4,24)$ a solution of the given linear equation?

○ No

○ Yes

Is $(0,0)$ a solution of the given linear equation?

○ No

○ Yes

Is $(0,-6)$ a solution of the given linear equation?

○ No

○ Yes

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Reading Graphs and the Coordinate System
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10. Determine whether each ordered pair is a solution of $x = -2$.

Is $(-2,0)$ a solution of the given linear equation?

- ○ No
- ○ Yes

Is $(3,2)$ a solution of the given linear equation?

- ○ Yes
- ○ No

Is $(-2,8)$ a solution of the given linear equation?

- ○ No
- ○ Yes

11. Determine whether each ordered pair is a solution of $9x - 6y = -9$.

Is $(0, \frac{3}{2})$ a solution of the given linear equation?

- ○ Yes
- ○ No

Is $(-\frac{9}{8}, 0)$ a solution of the given linear equation?

- ○ Yes
- ○ No

Is $(-3, -3)$ a solution of the given linear equation?

- ○ Yes
- ○ No

12. Determine whether each ordered pair is a solution of $x = -\frac{6}{7}y$.

Is (0,0) a solution of the given linear equation?

○ No

○ Yes

Is (− 6,7) a solution of the given linear equation?

○ Yes

○ No

13. Complete each ordered pair so that it is a solution of the given linear equation.

$-2x - 3y = 1$

($\square$,3)

(1,$\square$)

14. Complete each ordered pair so that it is a solution of the given linear equation.

$y = 0$

(− 6,$\square$)

(− 2,$\square$)

(6,$\square$)

15. Complete each ordered pair so that it is a solution of the given linear equation.

$-7x + 2y = -14$

($\square$,0)

(0,$\square$)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System

16. Complete each ordered pair so that it is a solution of the given linear equation. Then, choose which graph represents the given linear equation.

$-7x + 5y = -35$

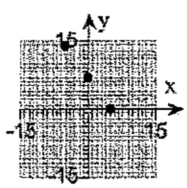
$(0, \square)$

$(\square, 0)$

$(\square, -14)$

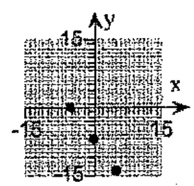
Choose which graph represents the linear equation $-7x + 5y = -35$.

○A.

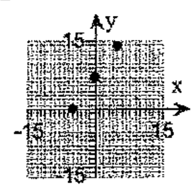


○B.

○C.



○D.



17. Complete each ordered pair so that it is a solution of the given linear equation. Then, choose which graph represents the given linear equation.

$x = -5$

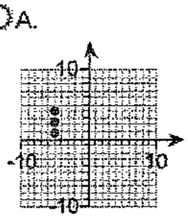
$(\square, 4)$

$(\square, 2.4)$

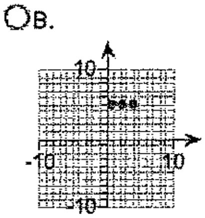
$(\square, \frac{7}{9})$

Now, choose which graph below represents the linear equation $x = -5$.

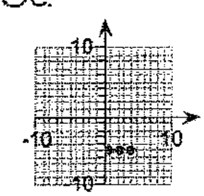
○A.



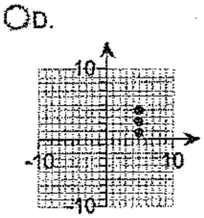
○B.



○C.



○D.



18. Complete each ordered pair so that it is a solution of the given linear equation. Then, choose which graph represents the given linear equation.

$y = 5$

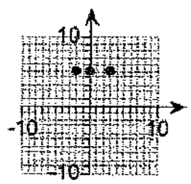
$(-2, \square)$

$(0, \square)$

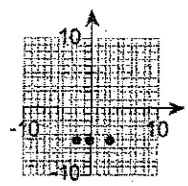
$(3, \square)$

Choose which graph represents the linear equation $y = 5$.

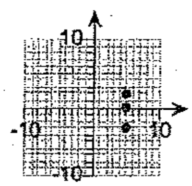
○ A.



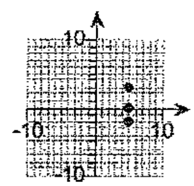
○ B.



○ C.



○ D.



19. Complete each ordered pair for the given linear equation. Then plot the ordered pair solutions.

$y = 3x$

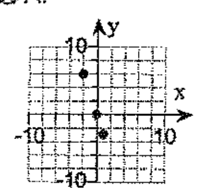
$(0, \square)$

$(-1, \square)$

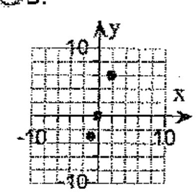
$(\square, 6)$

Choose the graph that shows the three ordered pair solutions found above.

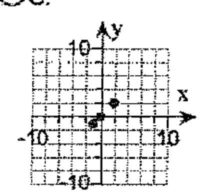
○ A.



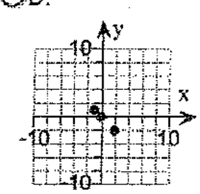
○ B.



○ C.



○ D.



Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Reading Graphs and the Coordinate System
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

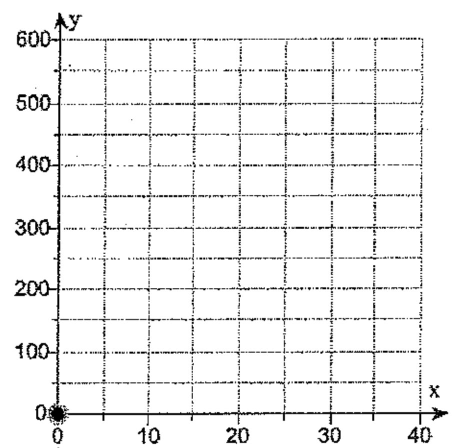
20. The cost in dollars y of producing x teddy bears is given by $y = 10x + 200$.

Complete the following table. Then, graph the results.

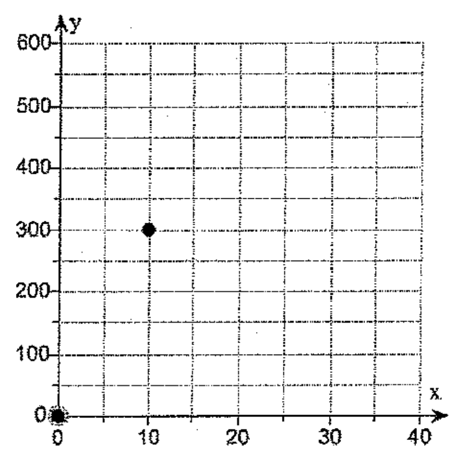
x	10	20	30
y	☐	☐	☐

(Type integers. Do not use the $ symbol.)

Plot the first point, (10,300), on the graph to the right.



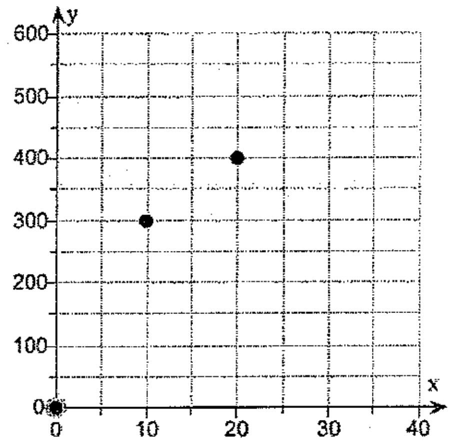
Plot the second point, (20,400), on the graph to the right.



Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Reading Graphs and the Coordinate System
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

20. (cont.)

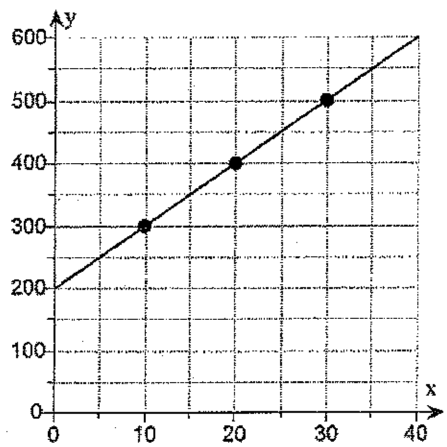
Plot the third point, (30,500), on the graph to the right.



Using the completed graph to the right, find the number of teddy bears that can be produced for $550.

What is the solution?

☐



Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System

1. D

---

2. 23

---

3. 74,100

---

4. 2000
76,900

---

5. $(-4,-2)$
the second choice

---

6. (2,0)
the fifth choice

---

7. (0,3)
the fifth choice

---

8. (1993,3)
(1994,6)
(1995,8)
(1996,9)
(1993,3)
(1994,6)
(1995,8)
(1996,9)
the first choice

---

9. the second choice
the second choice
the first choice

---

10. the second choice
the second choice
the second choice

---

11. the first choice
the second choice
the first choice

---

12. the second choice
the first choice

---

13. -5
-1

---

14. 0
0
0

---

15. 2
-7

---

16. -7
5
-5
B

---

17. -5
-5
-5
A

---

18. 5
5
5
A

---

19. 0
-3
2
B

---

20. 300
400
500
(10,300)
(20,400)
(30,500)
35

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear Equations

1. Determine if the given equation is a linear equation in two variables.

$2x = y + 6$

Is the equation a linear equation in two variables?

○ Yes

○ No

2. Determine if the given equation is a linear equation in two variables.

$5x^2 + 4y = 5$

Is the equation a linear equation in two variables?

○ Yes

○ No

3. Determine if the given equation is a linear equation in two variables.

$x = 3$

Is the equation a linear equation in two variables?

○ Yes

○ No

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear Equations

4. Graph the linear equation.

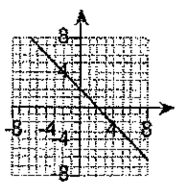
$3x - 3y = 6$

Find three ordered pair solutions of the given equation.

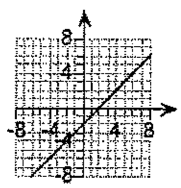
x	y	
0	☐	(Type an integer or a simplified fraction.)
☐	0	(Type an integer or a simplified fraction.)
1	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $3x - 3y = 6$? Choose the correct graph below.

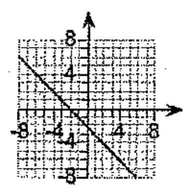
○ A.



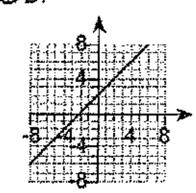
○ B.



○ C.



○ D.



5. Graph the linear equation.

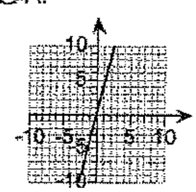
$y = -4x$

Find three ordered pair solutions of the given equation.

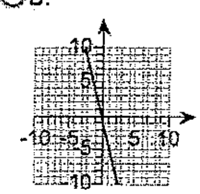
x	y	
0	☐	(Type an integer or a simplified fraction.)
−2	☐	(Type an integer or a simplified fraction.)
1	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $y = -4x$? Choose the correct graph below.

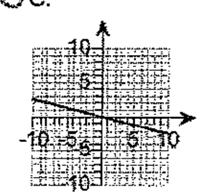
○ A.



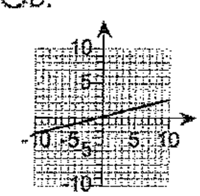
○ B.



○ C.



○ D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

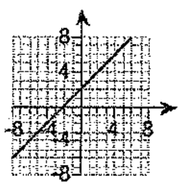
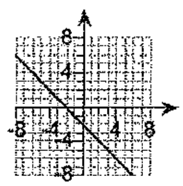
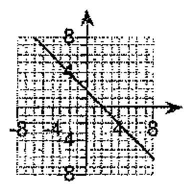
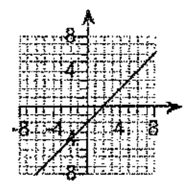
6. Graph the linear equation.

$5x + 5y = 10$

Find three ordered pair solutions, and plot them on the graph to graph the line.

x	y	
0	☐	(Type an integer or a simplified fraction.)
☐	0	(Type an integer or a simplified fraction.)
1	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $5x + 5y = 10$? Choose the correct graph below.

○A.

○B.

○C.

○D.


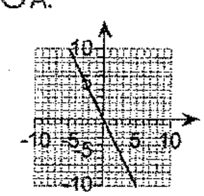
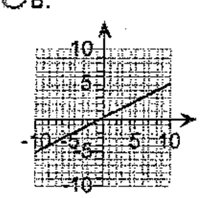
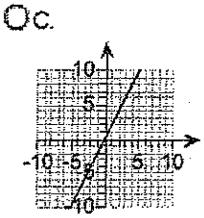
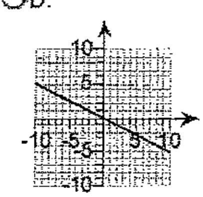
7. Graph the linear equation.

$x = -2y$

Find three ordered pair solutions, and plot them on the graph to graph the line.

x	y	
☐	0	(Type an integer or a simplified fraction.)
☐	-3	(Type an integer or a simplified fraction.)
☐	1	(Type an integer or a simplified fraction.)

Which graph is the graph of $x = -2y$? Choose the correct graph below.

○A.

○B.

○C.

○D.


Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

8. Graph the linear equation.

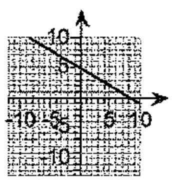
$$y = \frac{3}{5}x - 5$$

Find three ordered pair solutions, and plot them on the graph to graph the line.

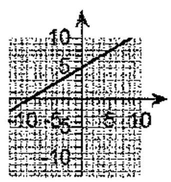
x	y	
0	☐	(Type an integer or a simplified fraction.)
− 10	☐	(Type an integer or a simplified fraction.)
5	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $y = \frac{3}{5}x - 5$? Choose the correct graph below.

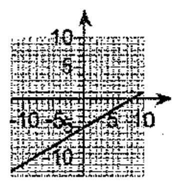
○A.



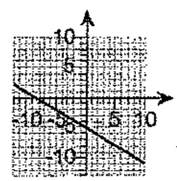
○B.



○C.



○D.



Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Properties of Real Numbers Quiz

1. Choose the property illustrated by the following statement.

$$8(2+3)=8\cdot 2+8\cdot 3$$

○A. associative property of addition

○B. associative property of multiplication

○C. commutative property of multiplication

○D. distributive property

2. Use the associative property to rewrite the following expression.

$$11\cdot(ab)$$

$11\cdot(ab)=\square$

3. Use the distributive property to write the following expression without parentheses.

$$2(x+y)$$

$2(x+y)=\square$

4. Choose the property illustrated by the following statement.

$$2+(x+4)=(2+x)+4$$

○A. associative property of addition

○B. commutative property of addition

○C. distributive property

○D. identity element of addition

5. Use the commutative property to rewrite the following expression.

$$-16\cdot y$$

$-16\cdot y=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Properties of Real Numbers Quiz

6. Use the distributive property to write the following sum as a product.

$20a + 20b$

$20a + 20b = \square$

---

7. Use the associative property to simplify the following expression.

$7(10y)$

$7(10y) = \square$

---

8. Use the distributive property to write the following expression without parentheses. Then, simplify the result.

$-9(x+2)+8$

$-9(x+2)+8 = \square$

---

9. Use the distributive property to write the following expression without parentheses.

$-\frac{3}{4}(8x-20y)$

$-\frac{3}{4}(8x-20y) = \square$ (Simplify your answer.)

---

10. Choose the property illustrated by the following statement.

$4 \cdot \frac{1}{4} = 1$

- A. commutative property of multiplication
- B. distributive property
- C. identity element of multiplication
- D. multiplicative inverse property

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Properties of Real Numbers Quiz

1. D

2. $(11a) \cdot b$

3. $2x + 2y$

4. A

5. $y \cdot (-16)$

6. $20(a + b)$

7. $70y$

8. $-9x - 10$

9. $-6x + 15y$

10. D

Student: ____________ Date: ____________ Time: ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

1. Use the distributive property to write the following expression without parentheses.

$-2(2-8m+n)$

$-2(2-8m+n)=\square$

2. Choose which set or sets the following number belongs to. Be sure to account for ALL sets.

$-\sqrt{13}$

○ A. rational numbers

○ B. irrational numbers

○ C. real numbers

○ D. irrational numbers, real numbers

○ E. rational numbers, real numbers

3. The low temperature in Eau Claire, Wisconsin, was $-25°$ last night. During the day it rose only 9°. Find the high temperature for the day.

The high temperature for the day was $\square°$.

4. Use the distributive property to write the following expression without parentheses.

$-(r-4-5p)$

$-(r-4-5p)=\square$

5. Subtract.

$-10-(-10)$

$-10-(-10)=\square$

6. Use the associative property to simplify the following expression.

$2+(16+b)$

$2+(16+b)=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

7. Use the associative property to rewrite the following expression.

$5 \cdot (ab)$

$5 \cdot (ab) = \square$

8. A commercial jet liner hits an air pocket and drops 239 feet. After climbing 167 feet, it drops another 177 feet. What is its overall vertical change?

The jet's overall vertical change is $\square$ feet.

9. Simplify the given expression.

$$\frac{5}{7} \cdot \frac{8}{9} - \frac{1}{5}$$

$\frac{5}{7} \cdot \frac{8}{9} - \frac{1}{5} = \square$ (Type an integer or a fraction. Simplify your answer.)

10. Simplify the fraction to lowest terms.

$$\frac{9}{19}$$

$\frac{9}{19} = \square$

11. Evaluate the following expression when $x = 1$ and $y = -2$.

$y^2 - x$

The answer is $\square$.

12. Use integers to represent the values in the following statement.

Brian Eckert deposited \$530 in his savings account. He later withdrew \$180.

The integer that represents the amount Brian Eckert deposited is $\square$.

The integer that represents the amount Brian Eckert withdrew is $\square$.

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

13. Write the following sentence as a mathematical statement.

Ten is greater than or equal to five.

The answer is $\square$.

14. Insert <, >, or = in the space provided to make a true statement.

-90 __ -90

$-90 \square -90$

15. Simplify the expression.

$-14-(1-2)$

$-14-(1-2)=\square$

16. Add or subtract as indicated. Reduce the answer to lowest terms.

$$\frac{1}{5}+\frac{3}{4}-\frac{3}{7}$$

$\frac{1}{5}+\frac{3}{4}-\frac{3}{7}=\square$ (Simplify your answer.)

17. Multiply the fractions. Reduce the answer to lowest terms.

$$\frac{1}{5}\cdot\frac{10}{13}$$

$\frac{1}{5}\cdot\frac{10}{13}=\square$ (Simplify your answer.)

18. Enter the given sentence as an equation.

Three increased by one equals the quotient of eight and two.

The equation is $\square$. (Type an equation. Do not simplify.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

19. Is the following statement true or false?

$$3+10 \geq 3(10)$$

○ False

○ True

20. Multiply.

$$(-1)(2)(-4)(-6)$$

$(-1)(2)(-4)(-6) = \square$

21. If $x = -7$ and $y = -3$, evaluate the expression.

$$8x+3y$$

The answer is $\square$.
(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

22. Find the additive inverse or opposite.

$$2$$

The additive inverse of 2 is $\square$.

23. Insert <, >, or = in the space provided to make a true statement.

$$\frac{12}{6} \_\_ \frac{12}{6}$$

$\frac{12}{6} \square \frac{12}{6}$

24. Add.

$$-13+(-1)$$

$-13+(-1) = \square$

25. Perform the indicated operation.

$$(-2)(8)-(-5)(6)$$

$(-2)(8)-(-5)(6)=\square$

26. Choose which group of sets the following number belongs to. Be sure to account for ALL sets.

$$-\frac{1}{3}$$

- ○A. real numbers, rational numbers
- ○B. real numbers, irrational numbers
- ○C. real numbers, rational numbers, natural numbers
- ○D. rational numbers, natural numbers, integers
- ○E. irrational numbers, natural numbers

27. Evaluate the given expression when $x=9$, $y=15$, and $z=17$.

$$\frac{x^2+z}{y^2+4z}$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

28. Add.

$$17+(-8)$$

$17+(-8)=\square$

29. Use the distributive property to write the following sum as a product.

$$8\cdot 6+8\cdot y$$

$8\cdot 6+8\cdot y=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

1. $-4 + 16m - 2n$

2. D

3. -16

4. $-r + 4 + 5p$

5. 0

6. $18 + b$

7. $(5a) \cdot b$

8. -249

9. $\frac{137}{315}$

10. $\frac{9}{19}$

11. 3

12. 530
    -180

13. $10 \geq 5$

14. $=$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

15. -13

16. $\frac{73}{140}$

17. $\frac{2}{13}$

18. $3+1=\frac{8}{2}$

19. the first choice

20. -48

21. -65

22. -2

23. $=$

24. -14

25. 14

26. A

27. $\frac{98}{293}$

28. 9

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Connecting to Algebra / Properties of Real Numbers

29. $8(6+y)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions

1. Simplify the expression by combining any like terms.

$7.4p - 6.4p$

$7.4p - 6.4p = \square$

2. Simplify the expression by combining any like terms.

$m - 4m - 9m + 9$

$m - 4m - 9m + 9 = \square$

3. Simplify the expression. First, use the distributive property to remove any parentheses.

$6(r + 6)$

$6(r + 6) = \square$

4. Simplify the expression. First, use the distributive property to remove any parentheses.

$-(-4y - 9z - 3)$

$-(-4y - 9z - 3) = \square$

5. Write the following as an algebraic expression.

Add $4x + 5$ to $7x - 1$.

The answer is $\square$. (Simplify your answer.)

6. Write the following as an algebraic expression.

Subtract $6x + 4$ from $2x - 8$.

The answer is $\square$. (Simplify your answer.)

Student: ______	Instructor: Darlene Ford	Assignment: Simplifing Algebraic Expressions
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

7. Simplify the expression.

$$10x^2 + 10x^2 - 3x^2$$

$10x^2 + 10x^2 - 3x^2 = \square$

8. Simplify the expression.

$$8 + 7(2m + 7)$$

$8 + 7(2m + 7) = \square$

9. Simplify the expression.

$$-3.5(3r - 2) + 4.7r$$

$-3.5(3r - 2) + 4.7r = \square$

10. Simplify the expression

$$-5r - 3.3 - 1.2r + 1.3r - 1$$

$-5r - 3.3 - 1.2r + 1.3r - 1 = \square$

11. Simplify the expression.

$$(-4x - 7) - (x + 4)$$

$(-4x - 7) - (x + 4) = \square$

12. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

the sum of 6 times a number and 1, added to 6 times a number

The answer is $\square$.

Student: ____________________ **Date:** ____________________ **Time:** ____________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions

13. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

Two times the sum of a number and six

The answer is $\square$.

---

14. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

Triple a number, minus the sum of the number and six

The answer is $\square$.

---

15. Write the following phrase as an algebraic expression and simplify if possible. Let x represent the unknown number.

Nine, multiplied by the quotient of a number and four

The answer is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifing Algebraic Expressions

1. p

2. $-12m+9$

3. $6r+36$

4. $4y+9z+3$

5. $11x+4$

6. $-4x-12$

7. $17x^2$

8. $14m+57$

9. $-5.8r+7$

10. $-4.9r-4.3$

11. $-5x-11$

12. $12x+1$

13. $2x+12$

14. $2x-6$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Simplifing Algebraic Expressions
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

15. $\frac{9x}{4}$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Addition and Multiplication Properties

1. Solve the equation for r.

$$r + 6.4 = -6.3$$

$r = \square$ (Type a decimal.)

---

2. Solve the equation for x.

$$x - 2 = 2x$$

$x = \square$

---

3. Solve the equation for y.

$$9y + 9 - 2y = 3 + 6y + 1$$

$y = \square$

---

4. Solve the equation for z.

$$3z + 3z = 5z - 4$$

$z = \square$

---

5. Solve the equation for z.

$$6(z + 2) = 9 + 7z$$

$z = \square$

---

6. Solve the equation for x.

$$6x = 30$$

$x = \square$

---

7. Solve the equation for x.

$$-x = -10$$

$x = \square$

---

8. Solve the equation for x.

$$-x+5=25$$

$x = \square$

---

9. Solve the equation for x.

$$2x-5=-7$$

$x = \square$

---

10. Solve the equation for x.

$$6x+\frac{5}{7}=\frac{2}{7}$$

$x = \square$ (Simplify your answer.)

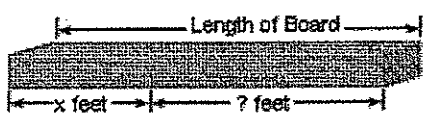
---

11. Two numbers have a sum of 73. If one number is p, express the other number in terms of p.

The answer is $\square$.

---

12. A 15-foot board is cut into two pieces. If one piece is x feet long, express the other length in terms of x.



$\square$ ft

---

13. In a mayoral election, Jane Smith received 306 more votes than Jack Jones. If Jack received n votes, how many votes did Jane receive?

The answer is $\square$.
(Type your answer in terms of n.)

14. Solve the equation for x.

$$-\frac{6}{5}x = -\frac{7}{6}$$

x = ☐ (Simplify your answer.)

15. Solve the equation for z.

$$6z - 9z = z - 8 + 4z$$

z = ☐ (Type an integer or a simplified fraction.)

Student: ____________________ **Date:** ____________________ **Time:** ____________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Addition and Multiplication Properties

1. -12.7

2. -2

3. -5

4. -4

5. 3

6. 5

7. 10

8. -20

9. -1

10. $-\frac{1}{14}$

11. $73 - p$

12. $15 - x$

13. $n + 306$

14. $\frac{35}{36}$

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Addition and Multiplication Properties
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

15. 1

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Linear Equations

1. Solve the equation for n.

$$7(3n-4)=(7n+7)+1$$

$n=\square$ (Type an integer or a fraction. Simplify your answer.)

2. Solve the equation for x.

$$\frac{3}{4}x-\frac{1}{2}=-2$$

$x=\square$ (Type an integer or a fraction. Simplify your answer.)

3. Solve the equation for x.

$$\frac{x}{3}+1=\frac{x}{7}+5$$

$x=\square$ (Type an integer or a fraction. Simplify your answer.)

4. Solve the equation for x.

$$\frac{2(x+4)}{3}=4x-2$$

$x=\square$ (Type an integer or a fraction. Simplify your answer.)

5. Solve the equation for x.

$$0.40x+0.80(30)=0.20(68)$$

$x=\square$

6. Solve the equation for y.

$$0.14(y-6)+0.08y=0.12y-0.03(60)$$

$y=\square$ (Type a decimal.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Solving Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

7. Solve the equation for x.

$$5(7x-1)-6=35x-11$$

$x=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

8. Solve the equation for c.

$$4(3c-3)-7=8c+9$$

$c=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

9. Solve the equation for x.

$$4x+\frac{3}{7}=5x-\frac{3}{7}$$

$x=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

10. Solve the equation for y.

$$\frac{8(y-6)}{5}=-4y$$

$y=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

---

11. Solve the equation for x.

$$2(x-4)+7=4x-2(3+x)$$

$x=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Solving Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

12. Solve the equation for t.

$$-3(t-3)+5t=8t-9$$

$t=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

13. Solve the equation for t.

$$0.07(6t+3)=0.42(t+2)-0.63$$

$t=\square$

(Type an integer or a fraction. Simplify your answer. Type N if there is no solution. Type R if the answer is all real numbers.)

14. Using x as the unknown number, write the statement below as an equation.

The sum of twice a number and 3 is equal to the sum of the number and 5.

Choose the equation that represents the given sentence.

- A. $2x+3=x+5$
- B. $2(x+3)=x+5$
- C. $3x+2=x+5$
- D. $3(x+2)=x+5$

Solve the equation for x.

$x=\square$

15. Using x as the unknown number, write the statement below as an equation.

Three times a number, minus 2, is equal to two times the number, plus 4.

Choose the equation that represents the given sentence.

○ A. $3x-2=2x+4$

○ B. $3(x-2)=2(x+4)$

○ C. $3\cdot 2-x=2\cdot 4+x$

○ D. $(3-2)\cdot x=(2+4)\cdot x$

Solve the equation for x.

$x=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Linear Equations

1. $\frac{18}{7}$

2. -2

3. 21

4. $\frac{7}{5}$

5. -26

6. -9.6

7. R

8. 7

9. $\frac{6}{7}$

10. $\frac{12}{7}$

11. N

12. 3

13. R

14. A
2

15. A
6

Student: ________ **Date:** ________ **Time:** ________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving

1. Twice the sum of a number and 2 is equal to three times the difference of the number and 5. Find the number.

   The number is $\square$.

2. The left and right page numbers of an open book are two consecutive integers whose sum is 53. Find these page numbers.

   The smaller page number is $\square$.

   The larger page number is $\square$.

3. The room numbers of two adjacent classrooms are two consecutive even numbers. If their sum is 414, find the classroom numbers.

   The classroom numbers are $\square$. (Use a comma to separate answers.)

4. A 24-inch board is to be cut into three pieces so that the second piece is 3 times as long as the first piece and the third piece is 4 times as long as the first piece. If x represents the length of the first piece, find the lengths of all three pieces.

   The first piece is $\square$ inches long.

   The second piece is $\square$ inches long.

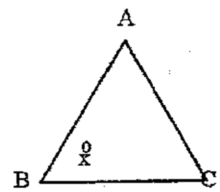
   The third piece is $\square$ inches long.

5. A car rental agency advertised renting a car for $24.95 per day and $0.26 per mile. If Greg rents this car for 4 days, how many whole miles can he drive on a $250 budget?

   $\square$ miles (Round down to the nearest whole mile.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving

6. Recall that the sum of the measures of the angles of a triangle is 180°. In the triangle to the right, angle C has the same measure as angle B, and angle A measures 27° less than angle B. Find the measure of each angle.



angle A = ☐ degrees

angle B = ☐ degrees

angle C = ☐ degrees

7. A 10-foot piece of string is cut into two pieces so that one piece is 1 foot longer than twice the shorter piece. If the shorter piece is x feet long, find the lengths of both pieces.

The shorter piece is ☐ feet long.

The longer piece is ☐ feet long.

8. A 19-foot piece of string is cut into two pieces so that one piece is 4 feet longer than twice the shorter piece. If the shorter piece is x feet long, find the lengths of both pieces.

The shorter piece is ☐ feet long.

The longer piece is ☐ feet long.

9. After a recent election, there were 4 more Republican governors than Democratic governors in the United States. If there are 50 state governors total, how many Democrats and how many Republicans held governor's offices after this election?

☐ Democratic governors

☐ Republican governors

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Problem Solving
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. 19

2. 26
   27

3. 206, 208

4. 3
   9
   12

5. 577

6. 42
   69
   69

7. 3
   7

8. 5
   14

9. 23
   27

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Formulas and Problem Solving

1. Substitute the given values into the formula, and solve for the unknown variable.

   $A = bh;\ A = 35, b = 5$

   $h = \square$

2. Substitute the given values into the formula, and solve for the unknown variable.

   $A = \frac{1}{2}h(B + b);\ A = 34, B = 8, b = 9$

   $h = \square$

3. Solve the formula for the specified variable.

   $V = XPK$ for X

   $X = \square$

4. Solve the formula for the specified variable.

   $A = P + PRT$ for R

   $R = \square$

5. Solve the formula for the specified variable.

   $D = \frac{1}{5}fk$ for f

   $f = \square$

6. The length of a rectangular garden is 6 meters. If 23 meters of fencing are required to fence the garden, find its width.

   $W = \square$ meters (Type an integer or a decimal.)

7. Convert 23° Fahrenheit to Celsius.

   $C = \square°$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Formulas and Problem Solving

8. The length of a rectangular parking lot is 8 meters less than twice its width, and the perimeter is 428 meters, find the length of the parking lot.

L = ☐ meters

9. A flower bed is in the shape of a triangle with one side twice the length of the shortest side, and the third side is 21 feet more than the length of the shortest side. Find the dimensions if the perimeter is 129 feet.

a = ☐ ft (shortest side)

b = ☐ ft (second side)

c = ☐ ft (third side)

10. Patsy's pizza sells one 16-inch cheese pizza or two 10-inch cheese pizzas for $11.99. Determine which size gives more pizza.

○ the 16-inch pizza

○ the 10-inch pizzas

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Formulas and Problem Solving

1. 7

2. 4

3. $\frac{V}{PK}$

4. $\frac{A-P}{PT}$

5. $\frac{5D}{k}$

6. 5.5

7. -5

8. 140

9. 27
   54
   48

10. the first choice

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving w/ Percent/Distance/Mixtures/Interest

1. Find last year's salary if, after a 5% pay raise, this year's salary is $38,325.

   $☐

2. The number of fraud complaints rose from 260,000 in 1998 to 360,000 in 1999. Find the percent increase.

   ☐% (Round to the nearest whole percent.)

3. The Smith family drove to the state park at 50 miles per hour and returned on the same route at 45 mph. Find the distance to the state park if the total driving time was 5.7 hours.

   ☐ miles

4. How much pure acid should be mixed with 3 gallons of a 50% acid solution in order to get a 80% acid solution?

   ☐ gallons (Round to two decimal places.)

5. Larry Mitchell invested part of his $36,000 advance at 8% annual simple interest and the rest at 5% annual simple interest. If his total yearly interest from both accounts was $1,830, find the amount invested at each rate.

   The amount invested at 8% is $☐.

   The amount invested at 5% is $☐.

6. Susan Marciano invested part of her $29,000 bonus in a fund that paid an 8% profit and invested the rest in stock that suffered a 5% loss. Find the amount of each investment if her overall net profit was $500.

   The amount invested at 8% is $☐.

   The amount invested in stock is $☐.

7. A housewife earns extra money by making and selling jewelry. Sharon bought earrings from her and later sold them for a 20% profit. If she sold them for $60, how much did Sharon pay for the earrings?

   $☐

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving w/ Percent/Distance/Mixtures/Interest

8. Dennis and Chris Reed leave simultaneously from the same point hiking in opposite directions, Dennis walking at 4 miles per hour and Chris at 3 mph. How long can they talk on their walkie-talkies if the walkie-talkies have a 20 mile radius?

☐ hrs (Round to one decimal place.)

9. How much of an alloy that is 30% copper should be mixed with 400 ounces of an alloy that is 60% copper in order to get an alloy that is 40% copper?

☐ ounces

10. At-home medical test kits have increased in popularity in recent years. This year, 310 million test kits are expected to be sold. This represents a 122% increase from the number of kits that were sold last year. How many medical test kits were sold last year?

☐ million test kits (Round to the nearest million.)

Student: ______	Instructor: Darlene Ford	Assignment: Solving w/ Percent/Distance/Mixtures/Interest
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. 36,500

2. 38

3. 135

4. 4.50

5. 1,000
   35,000

6. 15,000
   14,000

7. 50

8. 2.9

9. 800

10. 140

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers Quiz

8. Subtract 11 from -17.

The difference is $\square$.

9. In some card games, it is possible to have a negative score. Lavonne Schultz currently has a score of 19 points. She then loses 25 points. What is Lavonne's new score?

Lavonne's new score is $\square$.

10. Add.

$$17+(-16)$$

$17+(-16)=\square$

11. Multiply.

$$-0.2\cdot(-0.7)$$

$-0.2\cdot(-0.7)=\square$

12. Evaluate.

$$-1^4$$

$-1^4=\square$

13. Divide.

$$\frac{-3}{0}$$

$\frac{-3}{0}=\square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

14. Add.

$$-\frac{7}{15}+\left(-\frac{2}{5}\right)$$

$-\frac{7}{15}+\left(-\frac{2}{5}\right)=\square$ (Simplify your answer.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers Quiz

15. Divide.

$$-\frac{4}{5} \div \frac{4}{5}$$

$-\frac{4}{5} \div \frac{4}{5} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers Quiz

1. 129

2. 6

3. -80

4. 9

5. -9

6. 1

7. -9

8. -28

9. -6

10. 1

11. 0.14

12. -1

13. N

14. $-\frac{13}{15}$

15. -1

Student: ____________ Date: ____________ Time: ____________	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Symbols and Sets of Numbers

1. Insert <, >, or = in the space provided to make the statement true.

   0 __ 5

   0 ☐ 5

2. Is the following statement true or false?

   $4+3 \geq 4(3)$

   ○ False

   ○ True

3. Is the following statement true or false?

   $-13 \leq -6$

   ○ False

   ○ True

4. Is the following statement true or false?

   $8+2 \geq 8(2)$

   ○ False

   ○ True

5. Write the following sentence as a mathematical statement.

   Four is less than five.

   The answer is ☐.

6. Write the following sentence as a mathematical statement.

   Five is greater than or equal to zero.

   The answer is ☐.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Symbols and Sets of Numbers

7. Write the following sentence as a mathematical statement.

   Negative two is not equal to negative eighteen.

   The answer is $\square$.

8. Use integers to represent the values in the following statement.

   Julie Monroe deposited $810 in her savings account. She later withdrew $358.

   The integer that represents the amount Julie Monroe deposited is $\square$.

   The integer that represents the amount Julie Monroe withdrew is $\square$.

9. Choose which group of sets the following number belongs to. Be sure to account for ALL sets.

   9

   ○ A. whole numbers, integers, rational numbers, natural numbers, real numbers

   ○ B. whole numbers, integers, rational numbers, real numbers

   ○ C. whole numbers, integers, irrational numbers, natural numbers, real numbers

   ○ D. whole numbers, integers, natural numbers, real numbers

10. Choose which group of sets the following number belongs to. Be sure to account for ALL sets.

    $\frac{4}{9}$

    ○ A. real numbers, rational numbers

    ○ B. real numbers, irrational numbers

    ○ C. real numbers, rational numbers, natural numbers

    ○ D. rational numbers, natural numbers, integers

    ○ E. irrational numbers, natural numbers

Student: ______	Instructor: Darlene Ford	Assignment: Symbols and Sets of Numbers
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

11. Choose which set or sets the following number belongs to. Be sure to account for ALL sets.

$-\sqrt{8}$

○ A. real numbers

○ B. rational numbers

○ C. irrational numbers, real numbers

○ D. rational numbers, real numbers

○ E. irrational numbers

12. Insert <, >, or = in the space provided to make a true statement.

50 __ 50

50 ☐ 50

13. Insert <, >, or = in the space provided to make a true statement.

$\frac{8}{4}$ __ $\frac{8}{4}$

$\frac{8}{4}$ ☐ $\frac{8}{4}$

14. Insert <, >, or = in the space provided to make a true statement.

$|-5|$ __ $|-2|$

$|-5|$ ☐ $|-2|$

15. Use integers to represent the values in the following statement.

Greg Burkett deposited $478 in his savings account. He later withdrew $218.

The integer that represents the amount Greg Burkett deposited is ☐.

The integer that represents the amount Greg Burkett withdrew is ☐.

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Symbols and Sets of Numbers

1. $<$

2. the first choice

3. the second choice

4. the first choice

5. $4 < 5$

6. $5 \geq 0$

7. $-2 \neq -18$

8. $\begin{array}{r} 810 \\ -358 \end{array}$

9. A

10. A

11. C

12. $=$

13. $=$

14. $>$

Student: ________________	**Instructor:** Darlene Ford	**Assignment:** Symbols and Sets of Numbers
Date: ________________	**Course:** Algebra I Martin-Gay	
Time: ________________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

15. $\begin{array}{r} 478 \\ -218 \end{array}$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Fraction Operations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Type the given number as a product of prime numbers.

$$15$$

$15 = \square$

2. Simplify the fraction to lowest terms.

$$\frac{9}{21}$$

$\frac{9}{21} = \square$

3. Simplify the fraction to lowest terms.

$$\frac{17}{19}$$

$\frac{17}{19} = \square$

4. Divide the fractions. Reduce the answer to lowest terms.

$$\frac{3}{10} \div \frac{4}{20}$$

$\frac{3}{10} \div \frac{4}{20} = \square$ (Simplify your answer.)

5. Multiply the fractions. Reduce the answer to lowest terms.

$$\frac{1}{3} \cdot \frac{9}{19}$$

$\frac{1}{3} \cdot \frac{9}{19} = \square$ (Simplify your answer.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Fraction Operations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

6. Multiply the fractions. Reduce the answer to lowest terms.

$$5\frac{1}{6}\cdot\frac{8}{9}$$

$5\frac{1}{6}\cdot\frac{8}{9}=\square$ (Simplify your answer.)

7. Add the fractions. Reduce the answer to lowest terms.

$$\frac{7}{10}+\frac{3}{10}$$

$\frac{7}{10}+\frac{3}{10}=\square$ (Simplify your answer.)

8. Subtract the fractions. Reduce the answer to lowest terms.

$$\frac{9}{13}-\frac{6}{13}$$

$\frac{9}{13}-\frac{6}{13}=\square$ (Simplify your answer.)

9. Write the fraction $\frac{2}{5}$ as an equivalent fraction with the given denominator 25.

$\frac{2}{5}=\square$

10. Add the fractions. Reduce the answer to lowest terms.

$$\frac{4}{5}+\frac{1}{6}$$

$\frac{4}{5}+\frac{1}{6}=\square$ (Simplify your answer.)

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Fraction Operations
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

11. Subtract the fractions. Reduce the answer to lowest terms.

$$4\frac{4}{12}-2\frac{1}{4}$$

$4\frac{4}{12}-2\frac{1}{4}=\square$ (Simplify your answer.)

12. Subtract the fractions. Reduce the answer to lowest terms.

$$\frac{6}{7}-\frac{3}{29}$$

$\frac{6}{7}-\frac{3}{29}=\square$ (Simplify your answer.)

13. Add. Reduce the answer to lowest terms.

$$6+\frac{7}{9}$$

$6+\frac{7}{9}=\square$ (Simplify your answer.)

14. Add the fractions. Reduce the answer to lowest terms.

$$2\frac{1}{8}+1\frac{1}{2}$$

$2\frac{1}{8}+1\frac{1}{2}=\square$ (Simplify your answer.)

15. Add or subtract as indicated. Reduce the answer to lowest terms.

$$\frac{1}{3}+\frac{2}{5}-\frac{2}{7}$$

$\frac{1}{3}+\frac{2}{5}-\frac{2}{7}=\square$ (Simplify your answer.)

Student: ____________________ **Date:** ____________________ **Time:** ____________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Fraction Operations

1. $5 \cdot 3$

2. $\frac{3}{7}$

3. $\frac{17}{19}$

4. $\frac{3}{2}$

5. $\frac{3}{19}$

6. $\frac{124}{27}$

7. 1

8. $\frac{3}{13}$

9. $\frac{10}{25}$

10. $\frac{29}{30}$

11. $\frac{25}{12}$

12. $\frac{153}{203}$

13. $\frac{61}{9}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Fraction Operations

14. $\frac{29}{8}$

15. $\frac{47}{105}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations

1. Evaluate the following expression and enter it in numerical form.

   5^2

   $5^2 = \square$

2. Evaluate the following expression.

   $\left(\frac{4}{7}\right)^2$

   $\left(\frac{4}{7}\right)^2 = \square$ (Type an integer or a fraction. Simplify your answer.)

3. Evaluate the given expression.

   1.6^2

   $1.6^2 = \square$

4. Simplify the given expression and enter in numerical form.

   $8 + 9 \cdot 7$

   $8 + 9 \cdot 7 = \square$

5. Simplify the given expression.

   $4 + (3 - 2) + 9^3$

   $4 + (3 - 2) + 9^3 = \square$

6. Simplify the given expression.

   $7 \cdot 8^2$

   $7 \cdot 8^2 = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations

7. Simplify the given expression.

$$\frac{5}{9}\cdot\frac{7}{9}-\frac{1}{6}$$

$\frac{5}{9}\cdot\frac{7}{9}-\frac{1}{6}=\square$ (Type an integer or a fraction. Simplify your answer.)

8. Simplify the given expression and enter the answer in numerical terms.

$$2[6+5(7-5)]$$

$2[6+5(7-5)]=\square$

9. Simplify the given expression and enter your answer in numerical terms.

$$\frac{3+8(4+7)}{5^2+9}$$

$\frac{3+8(4+7)}{5^2+9}=\square$ (Type an integer or a fraction. Simplify your answer.)

10. Simplify the given expression and enter your answer in numerical terms.

$$\frac{9+|5-3|+8^3}{4-1}$$

$\frac{9+|5-3|+8^3}{4-1}=\square$ (Type an integer or a fraction. Simplify your answer.)

11. Evaluate the following expression when $x=5$, $y=4$, and $z=3$.

$$\frac{z}{4x}$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

12. Evaluate the following expression when $x=1$, $y=2$, and $z=5$.

$$|4x+5y|$$

The answer is $\square$.

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Variable Expressions and Equations
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13. Evaluate the expression if $x = 20$, $y = 5$, and $z = 4$

$$\frac{x}{z} + 3y$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

---

14. Evaluate the given expression when $x = 19$, $y = 15$, and $z = 12$.

$$x^2 - 4y + x$$

The answer is $\square$.

---

15. Evaluate the given expression when $x = 10$, $y = 2$, and $z = 13$.

$$\frac{x^2 + z}{y^2 + 2z}$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

---

16. Determine if the given number is a solution or is not a solution of the given equation.

Is 9 a solution of the equation $9x + 8 = 7x$?

- ○ Yes
- ○ No

---

17. Is 6 a solution to the equation $x + 7 = x + 7$?

- ○ Yes
- ○ No

---

18. Enter the following phrase as an algebraic expression. Let x represent the unknown number.

Three subtracted from a number

The algebraic expression is $\square$.

Student: ____________ Date: ____________ Time: ____________	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Variable Expressions and Equations

19. Enter the following phrase as an algebraic expression. Let x represent the unknown number.

    Three times a number, increased by 20

    The algebraic expression is ☐.

20. Enter the given sentence as an equation.

    Three increased by one equals the quotient of eight and two.

    The equation is ☐. (Type an equation. Do not simplify.)

21. Enter the following sentence as an equation.

    Nine is not equal to four divided by three.

    The inequality is ☐.

22. Enter the given sentence as an equation. Use x to represent any unknown number.

    Twenty minus four times a number is 20.

    The equation is ☐.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations

1. 25

2. $\frac{16}{49}$

3. 2.56

4. 71

5. 734

6. 448

7. $\frac{43}{162}$

8. 32

9. $\frac{91}{34}$

10. $\frac{523}{3}$

11. $\frac{3}{20}$

12. 14

13. 20

14. 320

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations

15. $\frac{113}{30}$

16. the second choice

17. the first choice

18. $x - 3$

19. $3x + 20$

20. $3 + 1 = \frac{8}{2}$

21. $9 \neq \frac{4}{3}$

22. $20 - 4x = 20$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

1. Add.

$-1+(-2)$

$-1+(-2)=\square$

2. Add.

$3+(-7)$

$3+(-7)=\square$

3. Add.

$|-16|+(-4)$

$|-16|+(-4)=\square$

4. Add.

$-18.9+(-14.1)$

$-18.9+(-14.1)=\square$

5. Add.

$-\frac{2}{15}+\left(-\frac{3}{5}\right)$

$-\frac{2}{15}+\left(-\frac{3}{5}\right)=\square$ (Simplify your answer.)

6. Add.

$-14+(-16)+(-19)$

$-14+(-16)+(-19)=\square$

7. Add.

$[-3+(-16)]+[-10+5]$

$[-3+(-16)]+[-10+5]=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

8. The low temperature in Eau Claire, Wisconsin, was $-15°$ last night. During the day it rose only $5°$. Find the high temperature for the day.

The high temperature for the day was $\square°$.

9. Find the additive inverse or opposite.

2

The additive inverse of 2 is $\square$.

10. Find the additive inverse or opposite.

$-\frac{3}{5}$

The additive inverse of $-\frac{3}{5}$ is $\square$.

11. Find the additive inverse or opposite.

$|-2|$

The additive inverse of $|-2|$ is $\square$.

12. Simplify the following.

$-|-1|$

$-|-1| = \square$

13. Simplify.

$-(-7)$

$-(-7) = \square$

14. Subtract.

$-11-13$

$-11-13 = \square$

Student: ________ **Date:** ________ **Time:** ________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

15. Subtract.

$$\frac{1}{8}-\frac{1}{7}$$

$\frac{1}{8}-\frac{1}{7}=\square$ (Simplify your answer. Type an integer or a fraction.)

16. Subtract.

$$9-(-11)$$

$9-(-11)=\square$

17. Subtract.

$$-14-(-14)$$

$-14-(-14)=\square$

18. Subtract.

$$-25-(-25)$$

$-25-(-25)=\square$

19. Subtract.

$$\frac{7}{17}-\left(-\frac{5}{17}\right)$$

$\frac{7}{17}-\left(-\frac{5}{17}\right)=\square$ (Simplify your answer. Type an integer or a fraction.)

20. Subtract 15 from -19.

The difference is $\square$.

21. Simplify the expression.

$$-4-(-12)+3-(-12)$$

$-4-(-12)+3-(-12)=\square$

Student: ____________ Date: ____________ Time: ____________	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Operations with Real Numbers

22. Simplify the expression.

$8-(6-17)$

$8-(6-17)=\square$

23. Evaluate the following expression when $x=-4$ and $y=-5$.

$x-y$

The answer is $\square$.

24. Evaluate the following expression when $x=2$ and $y=8$.

$\frac{3-x}{y+4}$

The answer is $\square$. (Simplify your answer. Type an integer or a fraction.)

25. Evaluate the following expression when $x=5$ and $y=-4$.

y^2-x

The answer is $\square$.

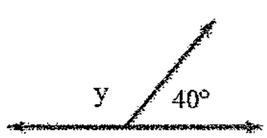
26. In some card games, it is possible to have a negative score. Lavonne Schultz currently has a score of 16 points. She then loses 22 points. What is Lavonne's new score?

Lavonne's new score is $\square$.

27. A commercial jet liner hits an air pocket and drops 276 feet. After climbing 190 feet, it drops another 135 feet. What is its overall vertical change?

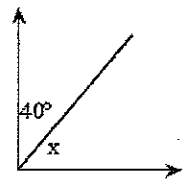
The jet's overall vertical change is $\square$ feet.

28. Find the unknown angle.



$y=\square^\circ$

29. Find the unknown angle.



$x = \square°$

30. Multiply.

$-8(9)$

$-8(9) = \square$

31. Multiply.

$-1 \cdot 0$

$-1 \cdot 0 = \square$

32. Multiply.

$-0.6 \cdot (-0.3)$

$-0.6 \cdot (-0.3) = \square$

33. Multiply.

$\frac{4}{9}\left(-\frac{2}{3}\right)$

$\frac{4}{9}\left(-\frac{2}{3}\right) = \square$ (Type an integer or a simplified fraction.)

34. Multiply.

$(-7)(2)(-3)(-1)$

$(-7)(2)(-3)(-1) = \square$

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35. Perform the indicated operation.

$(-2)(9)-(-5)(8)$

$(-2)(9)-(-5)(8)=\square$

36. Evaluate.

$(-5)^3$

$(-5)^3=\square$

37. Evaluate.

-1^3

$-1^3=\square$

38. Evaluate.

-5^2

$-5^2=\square$

39. Find the reciprocal or multiplicative inverse.

-5

The answer is $\square$.

40. Find the reciprocal or multiplicative inverse.

$-\frac{8}{15}$

The answer is $\square$. (Type an integer or a simplified fraction.)

41. Find the reciprocal or multiplicative inverse.

0.3

The answer is $\square$. (Type an integer or a fraction.)

Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

42. Divide.

$$\frac{-16}{8}$$

$\frac{-16}{8} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

43. Divide.

$$\frac{0}{-5}$$

$\frac{0}{-5} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

44. Divide.

$$\frac{6}{0}$$

$\frac{6}{0} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

45. Divide.

$$\frac{8}{9} \div \left(-\frac{1}{5}\right)$$

$\frac{8}{9} \div \left(-\frac{1}{5}\right) = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

46. If $x = -1$ and $y = -1$, evaluate the expression.

$$\frac{-5-6x}{y+1}$$

The answer is $\square$.

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

47. Divide.

$$\frac{-8}{0}$$

$\frac{-8}{0} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

48. Divide.

$$-\frac{6}{7} \div \frac{6}{7}$$

$-\frac{6}{7} \div \frac{6}{7} = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

49. Simplify.

$$\frac{-1-4^2}{-7(-8)}$$

$\frac{-1-4^2}{-7(-8)} = \square$ (Type an integer or a simplified fraction.)

50. If $x = -1$ and $y = -9$, evaluate the expression.

$$3x^2 - 9y^2$$

The answer is $\square$.

(Type an integer or a fraction. Simplify your answer. Type N if the expression is undefined.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

1. -3

2. -4

3. 12

4. -33

5. $-\frac{11}{15}$

6. -49

7. -24

8. -10

9. -2

10. $\frac{3}{5}$

11. -2

12. -1

13. 7

14. -24

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

15. $-\frac{1}{56}$

16. 20

17. 0

18. 0

19. $\frac{12}{17}$

20. -34

21. 23

22. 19

23. 1

24. $\frac{1}{12}$

25. 11

26. -6

27. -221

28. 140

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

29. 50

30. -72

31. 0

32. 0.18

33. $-\frac{8}{27}$

34. -42

35. 22

36. -125

37. -1

38. -25

39. $-\frac{1}{5}$

40. $-\frac{15}{8}$

41. $\frac{1}{0.3}$

42. -2

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers

43. 0

44. N

45. $-\frac{40}{9}$

46. N

47. N

48. -1

49. $-\frac{17}{56}$

50. -726

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Properties of Real Numbers

1. Use the commutative property to rewrite the following expression.

$x+3$

$x+3=\square$

---

2. Use the commutative property to rewrite the following expression.

$-9\cdot y$

$-9\cdot y=\square$

---

3. Use the associative property to rewrite the following expression.

$17+(a+b)$

$17+(a+b)=\square$

---

4. Use the associative property to rewrite the following expression.

$16\cdot(ab)$

$16\cdot(ab)=\square$

---

5. Use the associative property to simplify the following expression.

$9+(10+b)$

$9+(10+b)=\square$

---

6. Use the associative property to simplify the following expression.

$6(8y)$

$6(8y)=\square$

Student: ____________	Instructor: Darlene Ford	Assignment: Properties of Real Numbers
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7. Use the associative property to simplify the following expression.

$$\frac{9}{7}\left(\frac{7}{9}s\right)$$

$\frac{9}{7}\left(\frac{7}{9}s\right) = \square$

8. Use the distributive property to write the following expression without parentheses.

$$4(x+y)$$

$4(x+y) = \square$

9. Use the distributive property to write the following expression without parentheses.

$$8(7x-7)$$

$8(7x-7) = \square$

10. Use the distributive property to write the following expression without parentheses.

$$-3(3-m+n)$$

$-3(3-m+n) = \square$

11. Use the distributive property to write the following expression without parentheses.

$$-(r-3-p)$$

$-(r-3-p) = \square$

12. Use the distributive property to write the following expression without parentheses.

$$-\frac{1}{4}(20x-8y)$$

$-\frac{1}{4}(20x-8y) = \square$ (Simplify your answer.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Properties of Real Numbers

13. Use the distributive property to write the following expression without parentheses. Then, simplify the result.

$-7(2x+6)+3$

$-7(2x+6)+3=\square$

---

14. Use the distributive property to write the following sum as a product.

$9\cdot 7+9\cdot y$

$9\cdot 7+9\cdot y=\square$

---

15. Use the distributive property to write the following sum as a product.

$30a+30b$

$30a+30b=\square$

---

16. Choose the property illustrated by the following statement.

$8\cdot 3=3\cdot 8$

○A. associative property of multiplication

○B. commutative property of multiplication

○C. distributive property

○D. identity element of multiplication

---

17. Choose the property illustrated by the following statement.

$7+(x+4)=(7+x)+4$

○A. associative property of addition

○B. commutative property of addition

○C. distributive property

○D. identity element of addition

Student: ______ Date: ______ Time: ______	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Properties of Real Numbers

18. Choose the property illustrated by the following statement.

$2(9+8)=2\cdot 9+2\cdot 8$

- A. associative property of addition
- B. associative property of multiplication
- C. commutative property of multiplication
- D. distributive property

19. Choose the property illustrated by the following statement.

$1\cdot 5=5$

- associative property of multiplication
- commutative property of multiplication
- distributive property
- identity element of multiplication

20. Choose the property illustrated by the following statement.

$(3\cdot y)\cdot 4=3\cdot(y\cdot 4)$

- A. associative property of multiplication
- B. commutative property of multiplication
- C. distributive property
- D. identity element of multiplication

21. Choose the property illustrated by the following statement.

$6\cdot\frac{1}{6}=1$

- A. commutative property of multiplication
- B. distributive property
- C. identity element of multiplication
- D. multiplicative inverse property

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Properties of Real Numbers
Date: ______________	**Course:** Algebra I Martin-Gay	
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22. Choose the property illustrated by the following statement.

$$0+6=6$$

- A. additive inverse property
- B. associative property of addition
- C. commutative property of addition
- D. identity element of addition

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Properties of Real Numbers
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. $3 + x$

2. $y \cdot (-9)$

3. $(17 + a) + b$

4. $(16a) \cdot b$

5. $19 + b$

6. $48y$

7. s

8. $4x + 4y$

9. $56x - 56$

10. $-9 + 3m - 3n$

11. $-r + 3 + p$

12. $-5x + 2y$

13. $-14x - 39$

14. $9(7 + y)$

15. $30(a + b)$

16. B

17. A

18. D

19. the fourth choice

20. A

21. D

22. D

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Symbols and Sets of Numbers Quiz

1. Choose which set or sets the following number belongs to. Be sure to account for ALL sets.

$-\sqrt{13}$

- ○ A. real numbers
- ○ B. rational numbers, real numbers
- ○ C. rational numbers
- ○ D. irrational numbers
- ○ E. irrational numbers, real numbers

2. Choose which group of sets the following number belongs to. Be sure to account for ALL sets.

8

- ○ A. whole numbers, integers, rational numbers, natural numbers, real numbers
- ○ B. whole numbers, integers, natural numbers, real numbers
- ○ C. whole numbers, integers, rational numbers, real numbers
- ○ D. whole numbers, integers, irrational numbers, natural numbers, real numbers

3. Use integers to represent the values in the following statement.

Meghan Cerretani deposited $205 in her savings account. She later withdrew $307.

The integer that represents the amount Meghan Cerretani deposited is $\square$.

The integer that represents the amount Meghan Cerretani withdrew is $\square$.

4. Write the following sentence as a mathematical statement.

Negative nineteen is not equal to negative seventeen.

The answer is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Symbols and Sets of Numbers Quiz

5. Choose which group of sets the following number belongs to. Be sure to account for ALL sets.

$$\frac{6}{7}$$

- ○ A. real numbers, rational numbers
- ○ B. real numbers, irrational numbers
- ○ C. real numbers, rational numbers, natural numbers
- ○ D. rational numbers, natural numbers, integers
- ○ E. irrational numbers, natural numbers

6. Insert <, >, or = in the space provided to make a true statement.

-60 __ -100

$-60 \; \square \; -100$

7. Insert <, >, or = in the space provided to make a true statement.

$\frac{12}{4}$ __ $\frac{16}{4}$

$\frac{12}{4} \; \square \; \frac{16}{4}$

8. Insert <, >, or = in the space provided to make a true statement.

$|-4|$ __ $|-8|$

$|-4| \; \square \; |-8|$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Symbols and Sets of Numbers Quiz

1. E

2. A

3. 205
   -307

4. $-19 \neq -17$

5. A

6. $>$

7. $<$

8. $<$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Fraction Review Quiz

1. Simplify the fraction to lowest terms.

$$\frac{9}{14}$$

$$\frac{9}{14} = \square$$

2. Write the fraction $\frac{4}{9}$ as an equivalent fraction with the given denominator 18.

$$\frac{4}{9} = \square$$

3. Divide the fractions. Reduce the answer to lowest terms.

$$\frac{2}{8} \div \frac{7}{24}$$

$\frac{2}{8} \div \frac{7}{24} = \square$ (Simplify your answer.)

4. Add the fractions. Reduce the answer to lowest terms.

$$3\frac{3}{8} + 1\frac{1}{4}$$

$3\frac{3}{8} + 1\frac{1}{4} = \square$ (Simplify your answer.)

5. Add the fractions. Reduce the answer to lowest terms.

$$\frac{2}{5} + \frac{2}{7}$$

$\frac{2}{5} + \frac{2}{7} = \square$ (Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Fraction Review Quiz

6. Multiply the fractions. Reduce the answer to lowest terms.

$$\frac{3}{7} \cdot \frac{21}{22}$$

$\frac{3}{7} \cdot \frac{21}{22} = \square$ (Simplify your answer.)

7. Subtract the fractions. Reduce the answer to lowest terms.

$$\frac{10}{16} - \frac{7}{16}$$

$\frac{10}{16} - \frac{7}{16} = \square$ (Simplify your answer.)

8. Subtract the fractions. Reduce the answer to lowest terms.

$$\frac{4}{5} - \frac{5}{29}$$

$\frac{4}{5} - \frac{5}{29} = \square$ (Simplify your answer.)

9. Type the given number as a product of prime numbers.

14

$14 = \square$

10. Add or subtract as indicated. Reduce the answer to lowest terms.

$$\frac{5}{7} + \frac{4}{5} - \frac{5}{6}$$

$\frac{5}{7} + \frac{4}{5} - \frac{5}{6} = \square$ (Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Fraction Review Quiz

1. $\frac{9}{14}$

---

2. $\frac{8}{18}$

---

3. $\frac{6}{7}$

---

4. $\frac{37}{8}$

---

5. $\frac{24}{35}$

---

6. $\frac{9}{22}$

---

7. $\frac{3}{16}$

---

8. $\frac{91}{145}$

---

9. $7 \cdot 2$

---

10. $\frac{143}{210}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations Quiz

1. Enter the given sentence as an equation.

   One increased by one equals the quotient of six and three.

   The equation is ☐. (Type an equation. Do not simplify.)

2. Simplify the given expression.

   $3 + (9 - 5) + 6^3$

   $3 + (9 - 5) + 6^3 = \square$

3. Evaluate the following expression.

   $\left(\frac{2}{7}\right)^2$

   $\left(\frac{2}{7}\right)^2 = \square$ (Type an integer or a fraction. Simplify your answer.)

4. Determine if the given number is a solution or is not a solution of the given equation.

   Is 2 a solution of the equation $4x + 2 = 5x$?

   ○ No

   ○ Yes

5. Simplify the given expression.

   $\frac{5}{9} \cdot \frac{5}{7} - \frac{1}{7}$

   $\frac{5}{9} \cdot \frac{5}{7} - \frac{1}{7} = \square$ (Type an integer or a fraction. Simplify your answer.)

6. Evaluate the following expression when $x = 1$, $y = 3$, and $z = 5$.

   $\frac{z}{5x}$

   The answer is ☐. (Type an integer or a fraction. Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variable Expressions and Equations Quiz

7. Simplify the given expression and enter your answer in numerical terms.

$$\frac{3+3(8+3)}{7^2+6}$$

$\frac{3+3(8+3)}{7^2+6} = \square$ (Type an integer or a fraction. Simplify your answer.)

8. Simplify the given expression and enter in numerical form.

$$9+2\cdot 5$$

$9+2\cdot 5 = \square$

9. Evaluate the given expression when $x=17$, $y=20$, and $z=17$.

$$\frac{x^2+z}{y^2+5z}$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

10. Evaluate the expression if $x=20$, $y=4$, and $z=5$

$$\frac{x}{z}+4y$$

The answer is $\square$. (Type an integer or a fraction. Simplify your answer.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Variable Expressions and Equations Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. $1+1=\frac{6}{3}$

2. 223

3. $\frac{4}{49}$

4. the second choice

5. $\frac{16}{63}$

6. 1

7. $\frac{36}{55}$

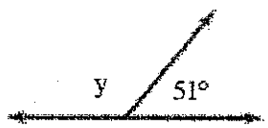
8. 19

9. $\frac{306}{485}$

10. 20

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Operations with Real Numbers Quiz

1. Find the unknown angle.



$y = \square°$

2. Simplify.

$-(-6)$

$-(-6) = \square$

3. Multiply.

$(-4)(4)(-5)(-1)$

$(-4)(4)(-5)(-1) = \square$

4. Simplify the expression.

$5^2 - 2 \cdot 8$

$5^2 - 2 \cdot 8 = \square$

5. Evaluate.

-3^2

$-3^2 = \square$

6. Subtract.

$-9 - (-10)$

$-9 - (-10) = \square$

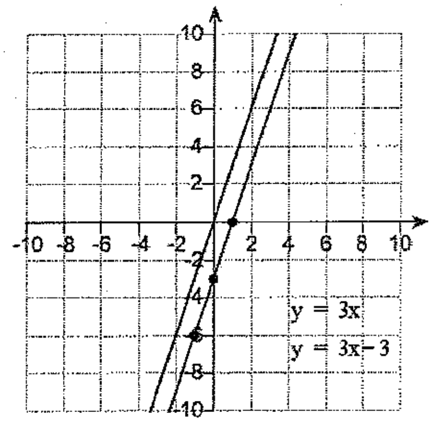
7. The low temperature in Eau Claire, Wisconsin, was $-13°$ last night. During the day it rose only $4°$. Find the high temperature for the day.

The high temperature for the day was $\square°$.

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

9. The graph of $y = 3x$ is given. Graph the linear equation $y = 3x - 3$ on the same set of axes. Discuss how the graphs are similar and how they are different.

The graph of $y = 3x$ is shown to the right. To graph $y = 3x - 3$, complete the following ordered pair solutions of $y = 3x - 3$.



x	y
0	☐

x	y
0	−3
1	☐

x	y
0	−3
1	0
−1	☐

The solutions have been graphed, and the graph of $y = 3x - 3$ has been drawn through the plotted solutions.

Compare the two graphs. Do the graphs appear to have the same upward tilt as you look from left to right?

○ Yes

○ No

Where does the graph of $y = 3x$ cross the y-axis?

at y = ☐

Where does the graph of $y = 3x - 3$ cross the y-axis?

9. (cont.)

at y = ☐

The graph of $y = 3x - 3$ is the same as the graph of $y = 3x$ moved

- ○ A. vertically downward 1 unit
- ○ B. vertically upward 3 units
- ○ C. vertically downward 3 units
- ○ D. the graphs are exactly the same

Student: ______	Instructor: Darlene Ford	Assignment: Graphing Linear Equations
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. The graph of $y=\frac{2}{9}x$ is given. Graph the linear equation $y=\frac{2}{9}x+5$ on the same set of axes. Discuss how the graphs are similar and how they are different.

The graph of $y=\frac{2}{9}x$ is shown to the right. To graph $y=\frac{2}{9}x+5$, complete the following ordered pair solutions of $y=\frac{2}{9}x+5$.

x	y
0	$\square$

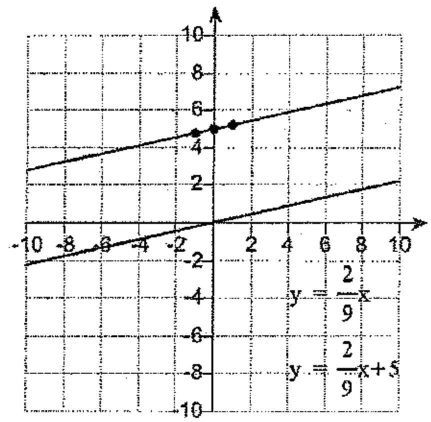
x	y
0	5
1	$\square$

x	y
0	5
1	$\frac{47}{9}$
-1	$\square$

The solutions have been graphed, and the graph of $y=\frac{2}{9}x+5$ has been drawn through the plotted solutions.

Compare the two graphs. Do the graphs appear to have the same upward tilt as you look from left to right?

- ○ Yes
- ○ No



10.
(cont.)

Where does the graph of $y = \frac{2}{9}x$ cross the y-axis?

at y = ☐

Where does the graph of $y = \frac{2}{9}x + 5$ cross the y-axis?

at y = ☐

The graph of $y = \frac{2}{9}x + 5$ is the same as the graph of $y = \frac{2}{9}x$ moved

- ○ A. vertically upward $\frac{2}{9}$ units
- ○ B. vertically upward 5 units
- ○ C. vertically downward 5 units
- ○ D. the graphs are exactly the same

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

11. The average weekly earnings (in dollars) by a group of workers is approximated by the equation $y = 20x + 200$ from 1998 to 2001 where x is the number of years after 1998. Graph this equation. Use the graph to predict the average weekly earnings in 2006.

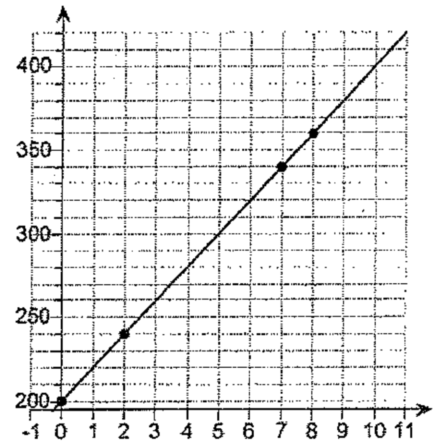
To graph $y = 20x + 200$, complete three ordered pair solutions. Begin with (0,?).

(0, $\square$)

(2, $\square$)

(7, $\square$)

The graph of $y = 20x + 200$ is plotted through the ordered pair solutions (0,200), (2,240), and (7,340) to the right.



Now, use the graph to predict the average weekly earnings in 2006.

$\$\square$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear Equations

1. the first choice

---

2. the second choice

---

3. the first choice

---

4. -2
   2
   -1
   B

---

5. 0
   8
   -4
   B

---

6. 2
   2
   1
   C

---

7. 0
   6
   -2
   D

---

8. -5
   -11
   -2
   C

---

9. -3
   0
   -6
   the first choice
   0
   -3
   C

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear Equations
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. 5

$\frac{47}{9}$

$\frac{43}{9}$

the first choice

0

5

B

---

11. 200

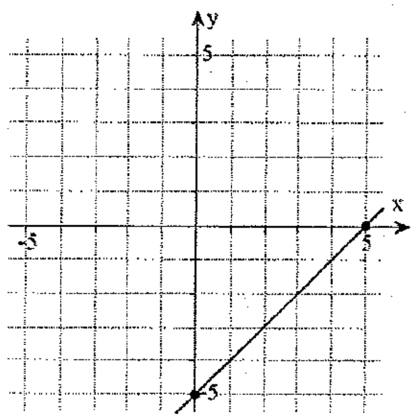
240

340

360

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts

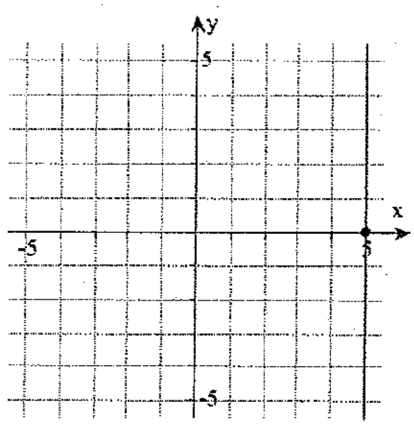
1. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

2. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

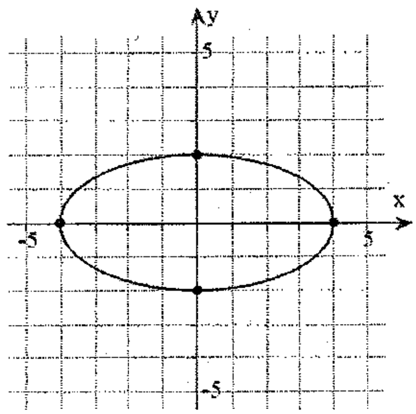
y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

Student: ____________
Date: ____________
Time: ____________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Intercepts

3. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

---

4. For the following linear equation, find two ordered pairs that satisfy the equation, along with a third ordered pair that satisfies the equation. Then, choose which graph represents the linear equation.

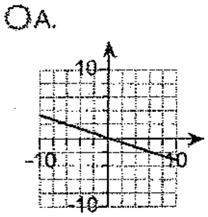
$x = 3y$

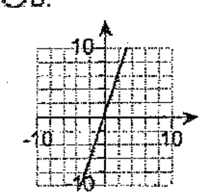
x-intercept = ☐ (Type an ordered pair.)

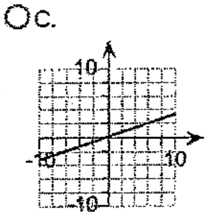
Complete the ordered pair to find a second point on the graph. (1, ☐)

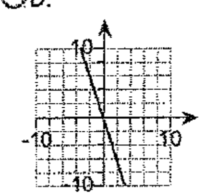
Complete the ordered pair to find a third point on the graph. (− 1, ☐)

Choose which graph represents the linear equation $x = 3y$.

○A.


○B.


○C.


○D.


Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Intercepts

5. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$4x + 5y = 20$

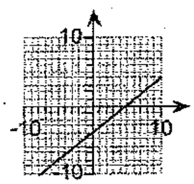
x-intercept = ☐ (Type an ordered pair.)

y-intercept = ☐ (Type an ordered pair.)

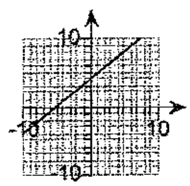
Complete the ordered pair to find a third checkpoint. (1, ☐)

Choose which graph represents the linear equation $4x + 5y = 20$.

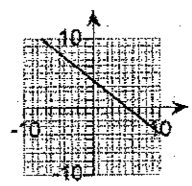
○ A.



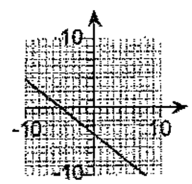
○ B.



○ C.



○ D.



6. For the following linear equation, find three ordered pair solutions. Then, choose which graph represents the linear equation.

$x = -1$

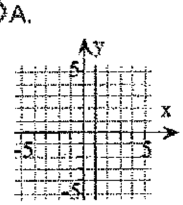
One ordered pair is (☐, 2).

A second ordered pair is (☐, 0).

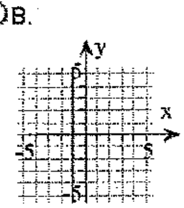
A third ordered pair (checkpoint) is (☐, -2).

Choose which graph represents the linear equation $x = -1$.

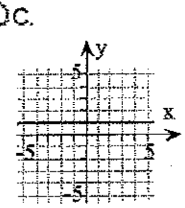
○ A.



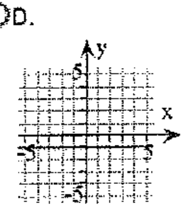
○ B.



○ C.



○ D.



Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Intercepts
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

7. For the following linear equation, find three ordered pair solutions. Then, choose which graph represents the linear equation.

$y = 1$

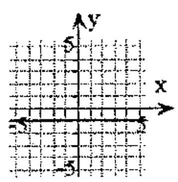
One ordered pair is (5, $\square$).

A second ordered pair is (0, $\square$).

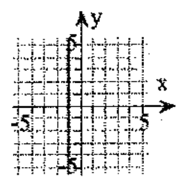
A third ordered pair (checkpoint) is (− 5, $\square$).

Choose which graph represents the linear equation y = 1.

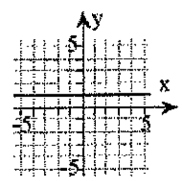
○ A.



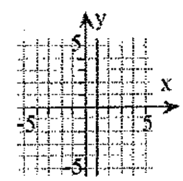
○ B.



○ C.



○ D.



8. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$x + 4y = 4$

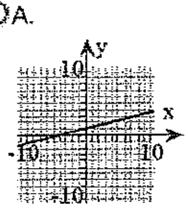
x-intercept = $\square$ (Type an ordered pair.)

y-intercept = $\square$ (Type an ordered pair.)

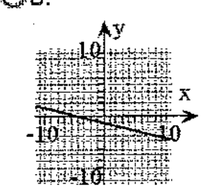
Complete the ordered pair to find a third checkpoint. (1, $\square$)

Choose which graph represents the linear equation x + 4y = 4.

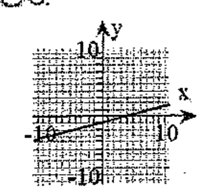
○ A.



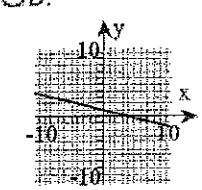
○ B.



○ C.



○ D.



Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts

9. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$x - 2 = -9y$

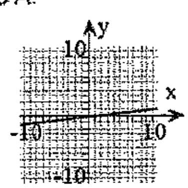
x-intercept = ☐ (Type an ordered pair.)

y-intercept = ☐ (Type an ordered pair. Do not use mixed numbers.)

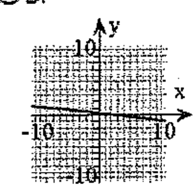
Complete the ordered pair to find a third checkpoint. (1, ☐)

Choose which graph represents the linear equation $x - 2 = -9y$.

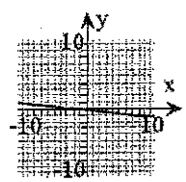
○A.



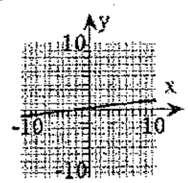
○B.



○C.



○D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Intercepts
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$$-8x+2y=1$$

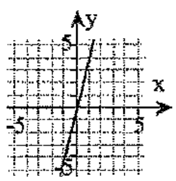
x-intercept = $\square$
(Type an ordered pair, using reduced fractions if necessary. Do not use mixed numbers.)

y-intercept = $\square$
(Type an ordered pair, using reduced fractions if necessary. Do not use mixed numbers.)

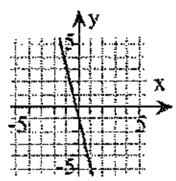
Complete the ordered pair to find a third checkpoint. $(1, \square)$
(Type an integer or reduced fraction. Do not use mixed numbers.)

Choose which graph represents the linear equation $-8x+2y=1$.

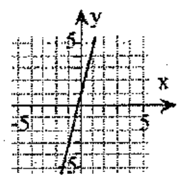
○ A.



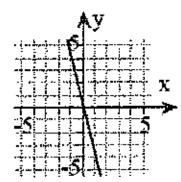
○ B.



○ C.



○ D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Intercepts
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

11. For the following linear equation, find two ordered pairs that satisfy the equation, along with a third checkpoint. Then, choose which graph represents the linear equation.

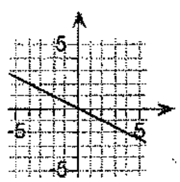
$y = -2x$

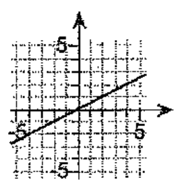
x-intercept = $\square$ (Type an ordered pair.)

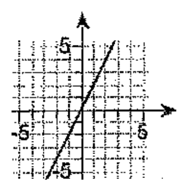
Complete the ordered pair to find a second point on the line. $(1, \square)$

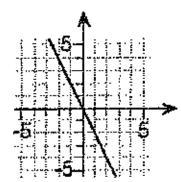
Complete the ordered pair to find a third checkpoint. $(-1, \square)$

Choose which graph represents the linear equation $y = -2x$.

○A.


○B.


○C.


○D.


Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Intercepts
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. $(5,0)$
   $(0,-5)$

---

2. $(5,0)$
   N

---

3. $(4,0),(-4,0)$
   $(0,2),(0,-2)$

---

4. $(0,0)$
   $\frac{1}{3}$
   $-\frac{1}{3}$
   C

---

5. $(5,0)$
   $(0,4)$
   $\frac{16}{5}$
   C

---

6. -1
   -1
   -1
   B

---

7. 1
   1
   1
   C

---

8. $(4,0)$
   $(0,1)$
   $\frac{3}{4}$
   D

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Intercepts

9. $(2,0)$
   $\left(0,\frac{2}{9}\right)$
   $\frac{1}{9}$
   B

---

10. $\left(-\frac{1}{8},0\right)$
   $\left(0,\frac{1}{2}\right)$
   $\frac{9}{2}$
   C

---

11. $(0,0)$
   -2
   2
   D

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope Intercept Form

1. Find the slope and the y-intercept of the line whose equation is $3x + y = 8$.

The slope is $\square$.

The y-intercept is $\square$. (Type an ordered pair.)

2. Find the slope and the y-intercept of the line whose equation is $-2x + 5y = -10$.

The slope is $\square$.

The y-intercept is $\square$. (Type an ordered pair.)

3. Find the slope and the y-intercept of the line whose equation is $y = -9$.

The slope is $\square$.

The y-intercept is $\square$. (Type an ordered pair.)

4. Determine whether the lines are parallel, perpendicular, or neither.

$$21 + 6x = 7y$$

$$7x + 2y = -4$$

Choose the correct answer below.

- ○ Parallel
- ○ Perpendicular
- ○ Neither

5. Determine whether the lines are parallel, perpendicular or neither.

$$5 + 6x = 5y$$

$$5x + 6y = -12$$

Choose the correct answer below.

- ○ Parallel
- ○ Perpendicular
- ○ Neither

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope Intercept Form

6. Determine whether the lines are parallel, perpendicular, or neither.

$$5x + 6y = -6$$

$$6y = -5x + 18$$

Choose the correct answer below.

○ Parallel

○ Perpendicular

○ Neither

7. Find the equation of the line with y-intercept $(0, -1)$ and slope of $-\frac{7}{9}$.

Enter the equation of the line in slope-intercept form:

☐

(Type an equation. Use integers or fractions for any numbers in the equation.)

8. Find the equation of the line with y-intercept $\left(0, -\frac{7}{9}\right)$ and slope of -8.

Enter the equation of the line in slope-intercept form:

☐

(Type an equation. Use integers or fractions for any numbers in the equation.)

9. Find the equation of the line with slope $= \frac{3}{4}$ and y-intercept $(0,0)$.

Enter the equation of the line in slope-intercept form:

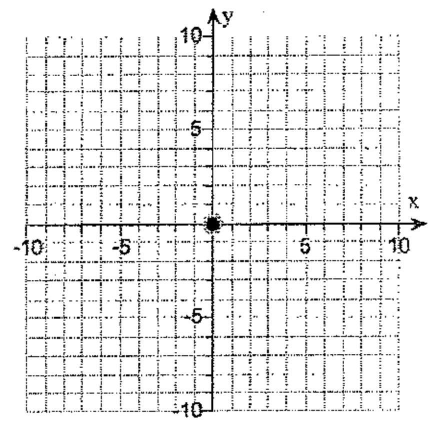
$y =$ ☐

(Type a reduced fraction or integer for all coefficents and constants. Do not use mixed numbers.)

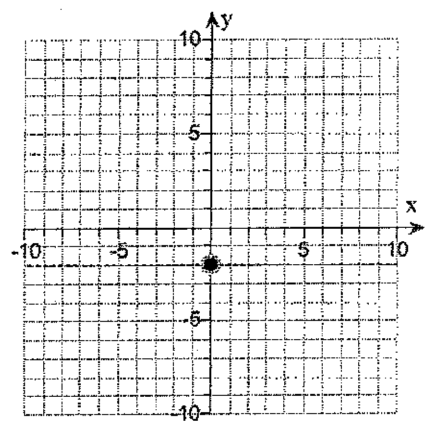
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope Intercept Form

10. Use the slope-intercept form to graph the equation $y = \frac{1}{5}x - 2$.

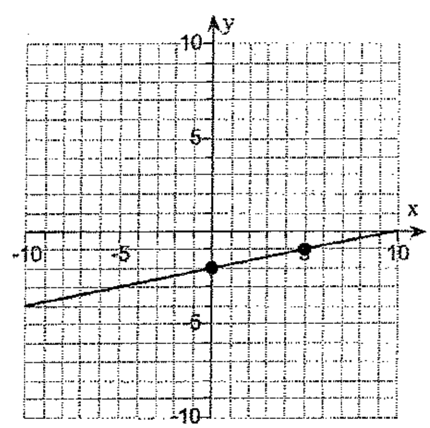
Plot the y-intercept point on the graph to the right.



Find another point of the line and plot it on the graph.



One possible point is $(5, -1)$. The line through $(0, -2)$ and $(5, -1)$ is the graph of $y = \frac{1}{5}x - 2$ as shown on the graph to the right.

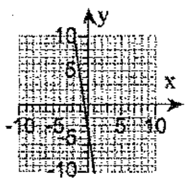


Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Slope Intercept Form
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

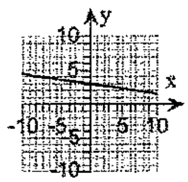
11. Use the slope-intercept form to graph the equation $y = -7x - 3$.

Choose the correct graph below.

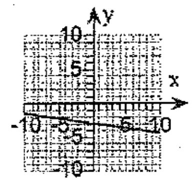
A.



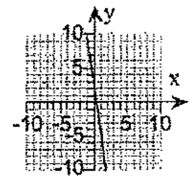
B.



C.



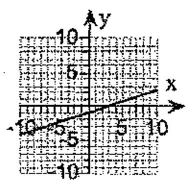
D.



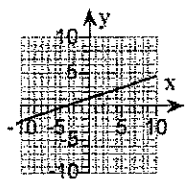
12. Use the slope-intercept form to graph the equation $-3x + y = -1$.

Choose the correct graph below.

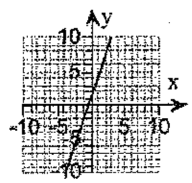
A.



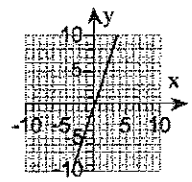
B.



C.



D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope Intercept Form

1. -3
   $(0,8)$

2. $\frac{2}{5}$
   $(0,-2)$

3. 0
   $(0,-9)$

4. the third choice

5. the second choice

6. the first choice

7. $y = -\frac{7}{9}x - 1$

8. $y = -8x - \frac{7}{9}$

9. $\frac{3}{4}x$

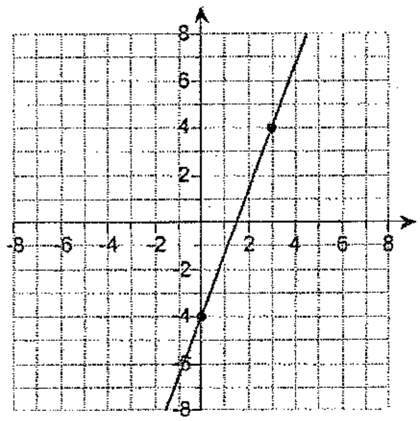
10. $(0,-2)$
    $(5,-1)$

11. A

12. D

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change

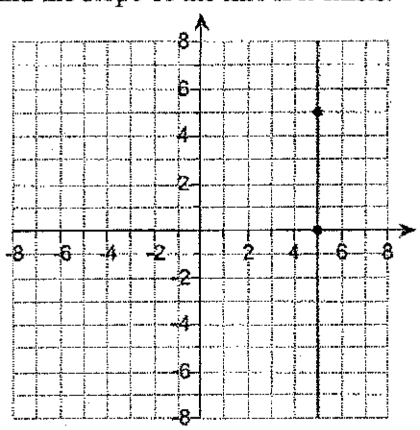
1. Find the slope of the line if it exists.



m = ☐

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

2. Find the slope of the line if it exists.

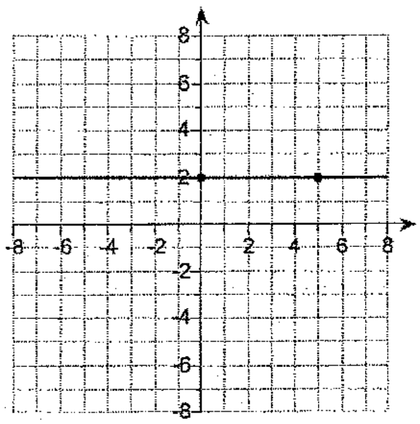


m = ☐

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change

3. Find the slope of the line if it exists.



m = ☐

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

4. Find the slope of the line that goes through the given points.

(4, − 8) and (1, 10)

m = ☐

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

5. Find the slope of the line that goes through the given points.

(− 9, 5) and (− 7, − 8)

m = ☐

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

6. Find the slope of the line that goes through the given points.

(1, − 7) and (1, − 8)

m = ☐

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

7. Find the slope of the line that goes through the given points.

(6, 4) and (7, 4)

m = ☐

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

8. Find the slope of the line $x = 7$.

$m = \square$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

9. Find the slope of the line $y = 4$.

$m = \square$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

10. Determine whether the lines through each pair of points are parallel, perpendicular, or neither.

$(-4, 5)$ and $(-9, 9)$ $(-2, 6)$ and $(-7, 10)$

- ○ Parallel
- ○ Perpendicular
- ○ Neither

11. Determine whether the lines through each pair of points are parallel, perpendicular, or neither.

$(-4, 5)$ and $(1, 9)$ $(6, -4)$ and $(2, 1)$

- ○ Parallel
- ○ Perpendicular
- ○ Neither

12. Find the slope of the line parallel to the line passing through the given points.

$(-5, 6)$ and $(4, 10)$

$m = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

13. Find the slope of the line perpendicular to the line passing through

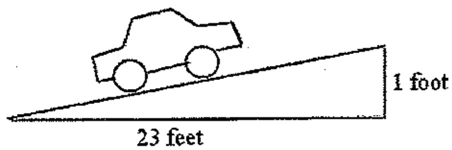
$(-7, -2)$ and $(-5, 3)$.

$m = \square$

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

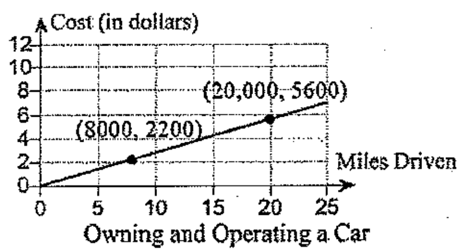
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change

14. The grade of a road is its slope written as a percent. Find the grade of the road shown.



The grade is ☐%.
(Round to one decimal place as needed.)

15. Find the slope of the line and write it as a rate of change.



The rate of change is $☐/mile.
(Round to two decimal places as needed.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change

1. $\frac{8}{3}$

2. N

3. 0

4. -6

5. $-\frac{13}{2}$

6. N

7. 0

8. N

9. 0

10. the first choice

11. the second choice

12. $\frac{4}{9}$

13. $-\frac{2}{5}$

14. 4.3

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darleue Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change

15. 0.28

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Point Slope Form

1. Use the point-slope form of the linear equation to find an equation of each line with the given slope and passing through the given point. Then write the equation in standard form.

   Slope 8; through $(9, -2)$

   The equation is $\square$.
   (Type your answer in standard form. Use integers for any numbers in the equation.)

2. Use the point-slope form of the linear equation to find an equation of each line with the given slope and passing through the given point. Then write the equation in standard form.

   Slope $\frac{1}{2}$; through $(3,1)$

   The equation is $\square$.
   (Type your answer in standard form. Use integers for any numbers in the equation.)

3. Find an equation of the line through the given points. Write the equation in standard form.

   Through $(-1, -4)$ and $(9, -8)$

   The equation is $\square$.
   (Type your answer in standard form. Use integers for any numbers in the equation.)

4. Find an equation of the horizontal line through $(2, -2)$.

   The equation is $\square$. (Type your answer in standard form.)

5. Find an equation of the vertical line through $(-1, 2)$.

   The equation is $\square$. (Type your answer in standard form.)

6. Find an equation parallel to $x = 7$ and passing through $(8, -7)$.

   The equation is $\square$. (Type your answer in standard form.)

Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Point Slope Form

7. Find an equation perpendicular to $x = -8$ and passing through $(7,3)$.

The equation is $\square$. (Type your answer in standard form.)

---

8. Find an equation of the line described. Write the equation in standard form.

Through $(-5, 6)$, parallel to the y-axis

The equation is $\square$. (Type your answer in standard form.)

---

9. Find an equation of the line described. Write the equation in standard form.

Through $(5, -2)$ and $(0,0)$

The equation is $\square$.
(Type your answer in standard form. Use integers for any numbers in the equation.)

---

10. Find an equation of the line described. Write the equation in standard form.

Through $(0,0)$ with slope -8

The equation is $\square$.
(Type your answer in standard form. Use integers for any numbers in the equation.)

---

11. Find an equation of the line described. Write the equation in standard form.

With undefined slope, through $\left(\frac{1}{2}, 6\right)$

The equation is $\square$. (Type your answer in standard form.)

---

12. Find an equation of the line described. Write the equation in standard form.

Through $(7,6)$, perpendicular to the y-axis

The equation is $\square$. (Type your answer in standard form.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Point Slope Form
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

13. In 2001 there were 6680 electric-powered vehicles in use in the United States. In 1998 only 4760 electric vehicles were being used. (*Source:* U.S. Energy Information Administration)

a. Assume that the relationship between time, x, and number of electric-powered vehicles, y, is linear. Write an equation in slope-intercept form describing this relationship. Use ordered pairs of the form (years past 1998, number of vehicles).

The equation is ☐. (Type your answer in slope-intercept form.)

b. Use this equation to predict the number of electric-powered vehicles in use in 2004.

☐ vehicles

---

14. The Pool Fun Company has learned that, by pricing a newly released Fun Noodle at $3, sales will reach 7000 Fun Noodles per day during the summer. Raising the price to $4 will cause the sales to fall to 3000 Fun Noodles per day.

a. Assume that the relationship between sales price, x, and number of Fun Noodles sold, y, is linear. Write an equation in slope-intercept form describing this relationship. Use ordered pairs of the form (sales price, number sold).

The equation is ☐. (Type your answer in slope-intercept form.)

b. Predict the daily sales of Fun Noodles if the price is $3.50.

☐ sales

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Point Slope Form

1. $8x - y = 74$

2. $x - 2y = 1$

3. $2x + 5y = -22$

4. $y = -2$

5. $x = -1$

6. $x = 8$

7. $y = 3$

8. $x = -5$

9. $2x + 5y = 0$

10. $8x + y = 0$

11. $x = \frac{1}{2}$

12. $y = 6$

13. $y = 640x + 4760$
8600

14. $y = -4000x + 19{,}000$
5000

Student: ______________
Date: ______________
Time: ______________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Functions

1. Find the domain and the range of the given relation.

$\{(0,3),(9,-9),(-8,-5),(-5,-8)\}$

The domain is $\{\square\}$. (Use a comma to separate answers as needed.)

The range is $\{\square\}$. (Use a comma to separate answers as needed.)

2. Determine if the given relation is also a function.

$\{(0,-1),(9,5),(0,8),(1,-9)\}$

Is the relation a function?

○ No

○ Yes

3. Determine if the given relation is also a function.

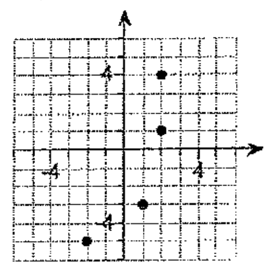
$\{(-3,3),(6,3),(-4,3)\}$

Is the relation a function?

○ No

○ Yes

4. Use the vertical line test to determine whether the given graph is the graph of a function.



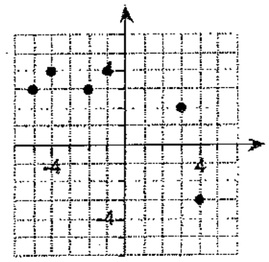
Is the graph the graph of a function?

○ Yes

○ No

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Functions
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

5. Use the vertical line test to determine whether the given graph is the graph of a function.

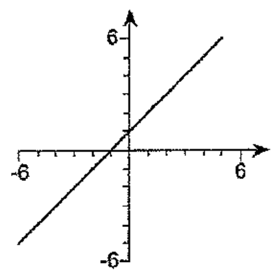


Is the graph the graph of a function?

○ Yes

○ No

6. Use the vertical line test to determine whether the given graph is the graph of a function.

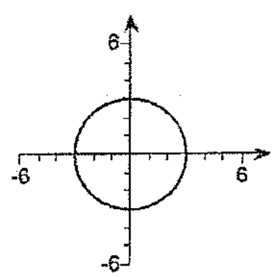


Is the graph the graph of a function? Choose the correct answer below.

○ Yes

○ No

7. Use the vertical line test to determine whether the given graph is the graph of a function.



Is the graph the graph of a function? Choose the correct answer below.

○ Yes

○ No

Student: ____________	Instructor: Darlene Ford	Assignment: Functions
Date: ____________	Course: Algebra I Martin-Gay	
Time: ____________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

8. Decide whether the equation describes a function.

$y = 2x + 1$

Does the equation describe a function?

- ○ Yes
- ○ No

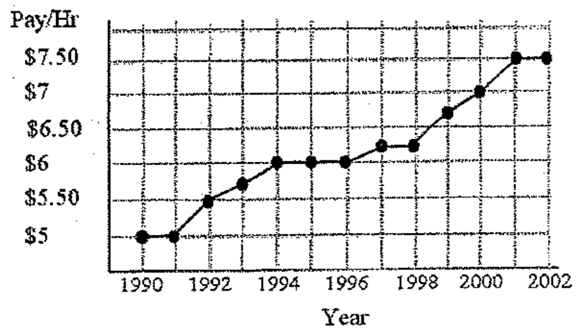
9. Decide whether the equation describes a function.

$x = -3$

Does the equation describe a function?

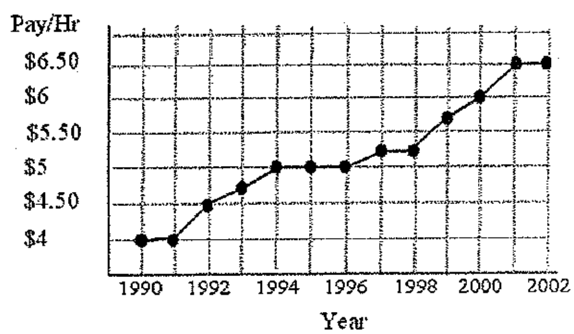
- ○ Yes
- ○ No

10. The graph to the right shows John's hourly pay at the beginning of each year shown. Use this graph to approximate John's pay at the beginning of 2000.



John's hourly pay at the beginning of 2000 was $☐ per hour.

11. The graph to the right shows Dominic's hourly pay rate at the beginning of each year shown. Use this graph to approximate the year when Dominic's pay rate increased to over $5.90 per hour.



The year when Dominic's hourly pay rate increased to over $5.90 per hour was ☐.

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Functions
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

12. Given the following function, find $f(-3)$, $f(0)$, and $f(2)$.

$$f(x) = -5x - 4$$

$f(-3) = \square$

$f(0) = \square$

$f(2) = \square$

---

13. Given the following function, find $f(-3)$, $f(0)$, and $f(1)$.

$$f(x) = x^2 - 2$$

$f(-3) = \square$

$f(0) = \square$

$f(1) = \square$

---

14. Find the domain of the given function.

$$f(x) = -7x + 9$$

The domain in interval notation is $\square$.

---

15. Find the domain of the given function.

$$h(x) = \frac{1}{x+6}$$

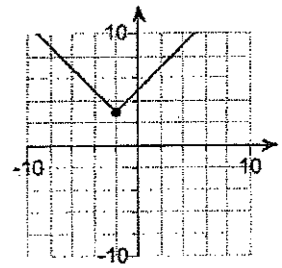
The answer is $\square$. (Type your answer in interval notation.)

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Functions

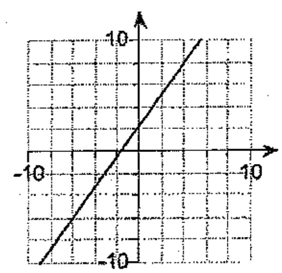
16. Find the domain and the range of the function graphed to the right.



The domain in interval notation is $\square$.

The range in interval notation is $\square$.

17. Find the domain and the range of the function graphed to the right.



The domain in interval notation is $\square$.

The range in interval notation is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Functions

1. $0, 9, -8, -5$
   $3, -9, -5, -8$

2. the first choice

3. the second choice

4. the second choice

5. the first choice

6. the first choice

7. the second choice

8. the first choice

9. the second choice

10. 7.00

11. 2000

12. 11
    -4
    -14

13. 7
    -2
    -1

14. $(-\infty, \infty)$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Functions

15. $(-\infty, -6) \cup (-6, \infty)$

---

16. $(-\infty, \infty)$
$[3, \infty)$

---

17. $(-\infty, \infty)$
$(-\infty, \infty)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System Quiz

1. Complete each ordered pair so that it is a solution of the given linear equation.

$3x + 7y = 21$

($\square$,0)

(0,$\square$)

2. Determine whether each ordered pair is a solution of $y = 2x$.

Is (4,8) a solution of the given linear equation?

○ Yes

○ No

Is (0,0) a solution of the given linear equation?

○ Yes

○ No

Is (7,12) a solution of the given linear equation?

○ No

○ Yes

3. Complete each ordered pair so that it is a solution of the given linear equation.

$3x - 5y = -7$

($\square$, − 1)

(6,$\square$)

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

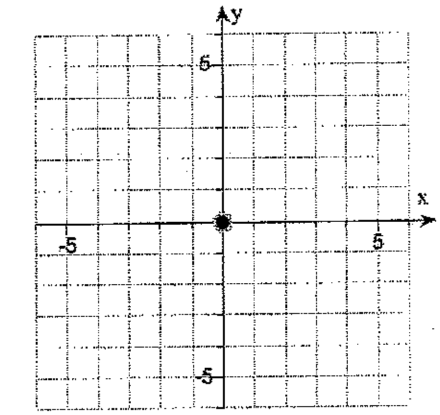
Assignment: Reading Graphs and the Coordinate System Quiz

4. Plot the ordered pair (1,3). State in which quadrant, if any, the point lies

Plot the ordered pair on the graph to the right.

Which quadrant does the point lie in?

- ○ IV
- ○ III
- ○ II
- ○ I
- ○ None of these

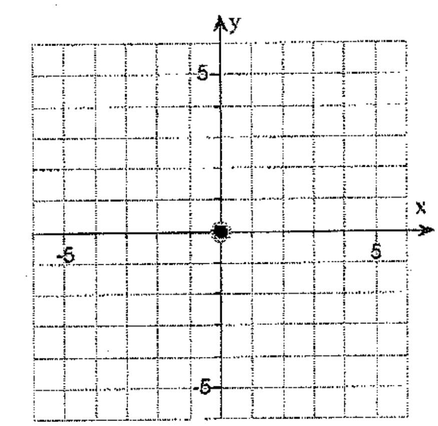


5. Plot the ordered pair $(-2,0)$. State in which quadrant, if any, the point lies.

Plot the ordered pair on the graph to the right.

Which quadrant does the point lie in?

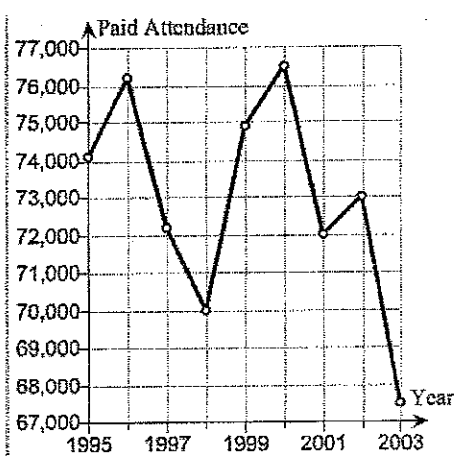
- ○ III
- ○ II
- ○ IV
- ○ I
- ○ None of these



6. The line graph shown to the right shows the attendance at each Super Bowl game from 1995 through 2003. Estimate the Super Bowl attendance in 2000.

Source: NFL

The Super Bowl attendance in 2000 was $\square$.
(Round to the nearest hundred.)



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Reading Graphs and the Coordinate System Quiz

7. Determine whether each ordered pair is a solution of $x = -7$.

Is $(-7,9)$ a solution of the given linear equation?

○ Yes

○ No

Is $(-7,0)$ a solution of the given linear equation?

○ No

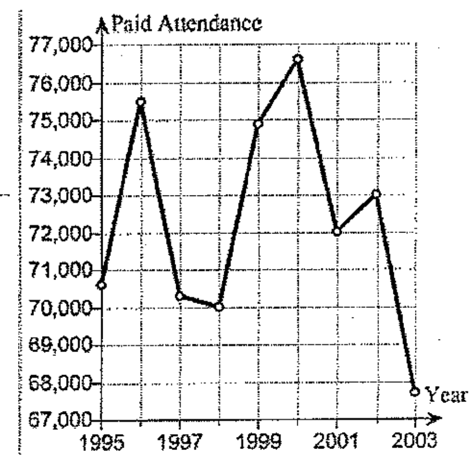
○ Yes

Is $(-9,-7)$ a solution of the given linear equation?

○ No

○ Yes

8. The line graph shown to the right shows the attendance at each championship football game from 1995 through 2003. Find the year on the graph with the greatest attendance, and approximate the attendance.



The year with the greatest attendance is ☐.

The approximate attendance was ☐. (Round to the nearest hundred.)

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
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Assignment: Reading Graphs and the Coordinate System Quiz

9. Complete each ordered pair so that it is a solution of the given linear equation. Then, choose which graph represents the given linear equation.

$x + 4y = 4$

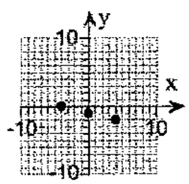
(0,☐)

(☐,0)

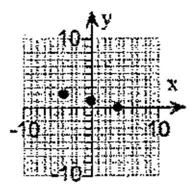
(☐,2)

Choose which graph represents the linear equation $x + 4y = 4$.

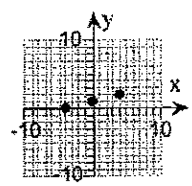
○A.



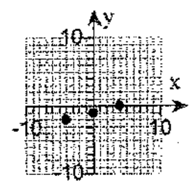
○B.



○C.



○D.



10. Complete each ordered pair so that it is a solution of the given linear equation. Then, choose which graph represents the given linear equation.

$y = 2$

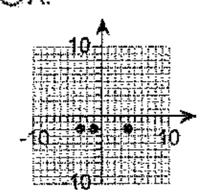
(4,☐)

(−1,☐)

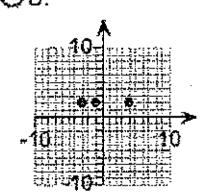
(−3,☐)

Choose which graph represents the linear equation $y = 2$.

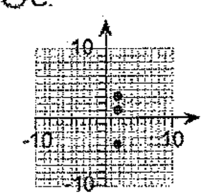
○A.



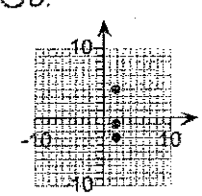
○B.



○C.



○D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Reading Graphs and the Coordinate System Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. 7
   3

---

2. the first choice
   the first choice
   the first choice

---

3. -4
   5

---

4. $(1,3)$
   the fourth choice

---

5. $(-2,0)$
   the fifth choice

---

6. 76,500

---

7. the first choice
   the second choice
   the first choice

---

8. 2000
   76,600

---

9. 1
   4
   -4
   B

---

10. 2
    2
    2
    B

Student: ____________	Instructor: Darlene Ford	Assignment: Graphing Linear Equations Quiz
Date: ____________	Course: Algebra I Martin-Gay	
Time: ____________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Graph the linear equation.

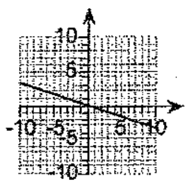
$y = 3x$

Find three ordered pair solutions of the given equation.

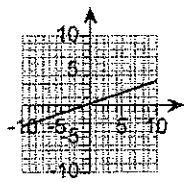
x	y	
0	☐	(Type an integer or a simplified fraction.)
− 2	☐	(Type an integer or a simplified fraction.)
2	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $y = 3x$? Choose the correct graph below.

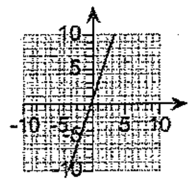
○ A.



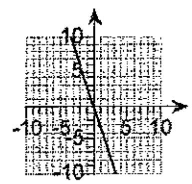
○ B.



○ C.



○ D.



2. Determine if the given equation is a linear equation in two variables.

$x = 12$

Is the equation a linear equation in two variables?

○ Yes

○ No

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear Equations Quiz

3. Graph the linear equation.

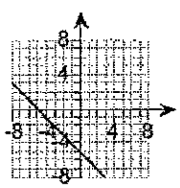
$4x - 4y = 20$

Find three ordered pair solutions of the given equation.

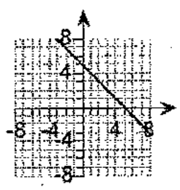
x	y	
0	☐	(Type an integer or a simplified fraction.)
☐	0	(Type an integer or a simplified fraction.)
1	☐	(Type an integer or a simplified fraction.)

Which graph is the graph of $4x - 4y = 20$? Choose the correct graph below.

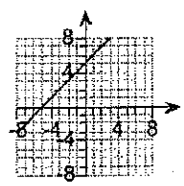
○ A.



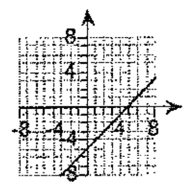
○ B.



○ C.



○ D.



4. Determine if the given equation is a linear equation in two variables.

$-8x^2 + y = -8$

Is the equation a linear equation in two variables?

○ Yes

○ No

Student: ______	Instructor: Darlene Ford	Assignment: Graphing Linear Equations Quiz
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

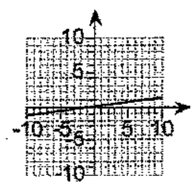
5. Graph the linear equation.

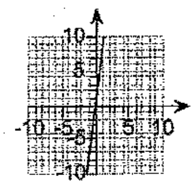
$x = -8y$

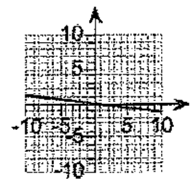
Find three ordered pair solutions, and plot them on the graph to graph the line.

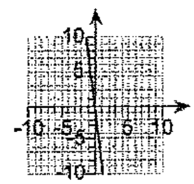
x	y	
☐	0	(Type an integer or a simplified fraction.)
☐	−1	(Type an integer or a simplified fraction.)
☐	1	(Type an integer or a simplified fraction.)

Which graph is the graph of $x = -8y$? Choose the correct graph below.

○A.


○B.


○C.


○D.


Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear Equations Quiz

1. 0
   -6
   6
   C

---

2. the first choice

---

3. -5
   5
   -4
   D

---

4. the second choice

---

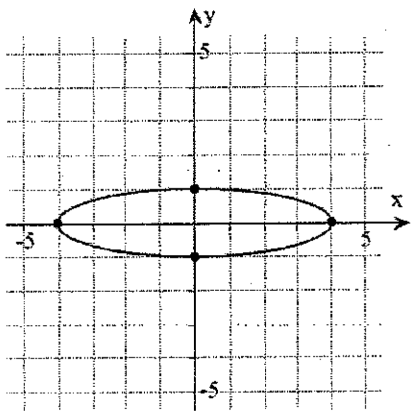
5. 0
   8
   -8
   C

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Intercepts Quiz

1. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

2. For the following linear equation, find three ordered pair solutions. Then, choose which graph represents the linear equation.

$y = 1$

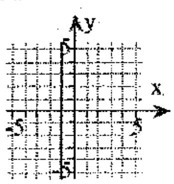
One ordered pair is (4, ☐).

A second ordered pair is (0, ☐).

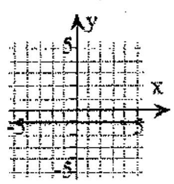
A third ordered pair (checkpoint) is (− 4, ☐).

Choose which graph represents the linear equation y = 1.

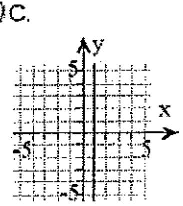
○A.



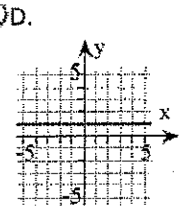
○B.



○C.



○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts Quiz

3. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

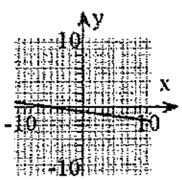
$x - 5 = 7y$

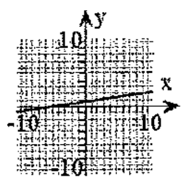
x-intercept = ☐ (Type an ordered pair.)

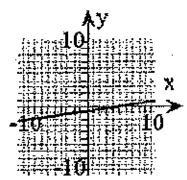
y-intercept = ☐ (Type an ordered pair. Do not use mixed numbers.)

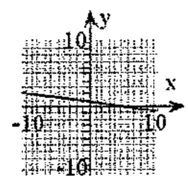
Complete the ordered pair to find a third checkpoint. (1, ☐)

Choose which graph represents the linear equation $x - 5 = 7y$.

○A.


○B.


○C.


○D.


4. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

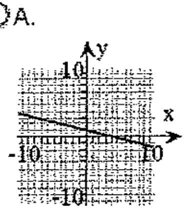
$x - 4y = 4$

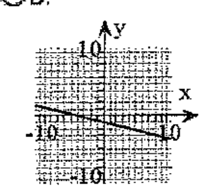
x-intercept = ☐ (Type an ordered pair.)

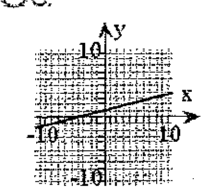
y-intercept = ☐ (Type an ordered pair.)

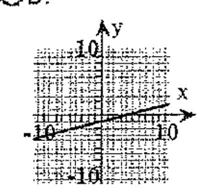
Complete the ordered pair to find a third checkpoint. (1, ☐)

Choose which graph represents the linear equation $x - 4y = 4$.

○A.


○B.


○C.


○D.


Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts Quiz

5. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$4x + 3y = 12$

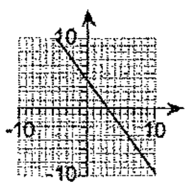
x-intercept = ☐ (Type an ordered pair.)

y-intercept = ☐ (Type an ordered pair.)

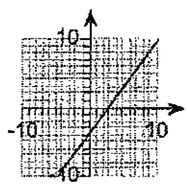
Complete the ordered pair to find a third checkpoint. (1, ☐)

Choose which graph represents the linear equation $4x + 3y = 12$.

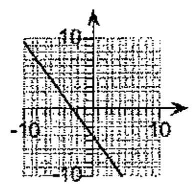
○A.



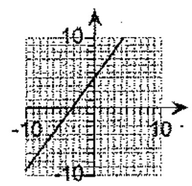
○B.



○C.



○D.



6. For the following linear equation, find two ordered pairs that satisfy the equation, along with a third ordered pair that satisfies the equation. Then, choose which graph represents the linear equation.

$x = 3y$

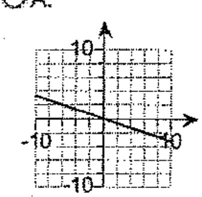
x-intercept = ☐ (Type an ordered pair.)

Complete the ordered pair to find a second point on the graph. (1, ☐)

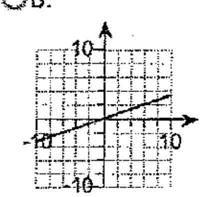
Complete the ordered pair to find a third point on the graph. (− 1, ☐)

Choose which graph represents the linear equation $x = 3y$.

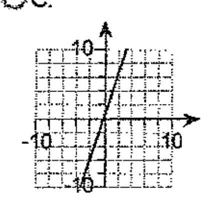
○A.



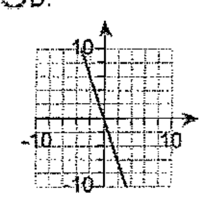
○B.



○C.

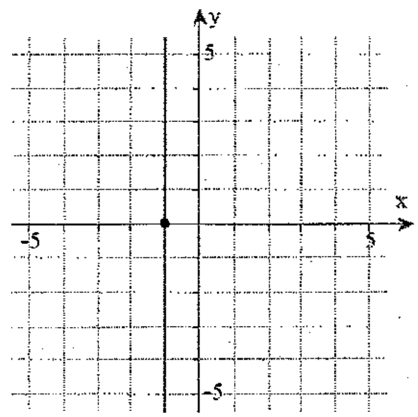


○D.



Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts Quiz

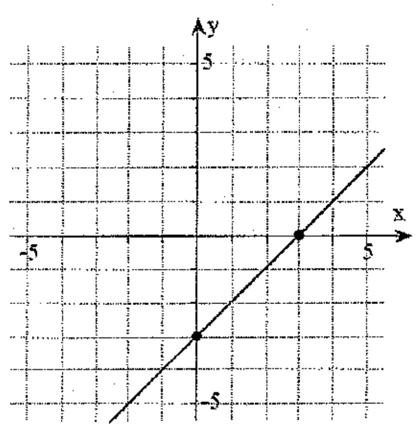
7. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

8. Identify the intercepts.



x-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

y-intercept(s) = ☐
(Type ordered pairs. Use a comma to separate answers as needed. Type N if there are no intercepts.)

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Intercepts Quiz

9. For the following linear equation, find three ordered pair solutions. Then, choose which graph represents the linear equation.

$x = -1$

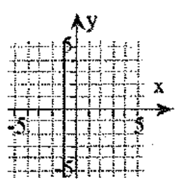
One ordered pair is ($\square$, 4).

A second ordered pair is ($\square$, 0).

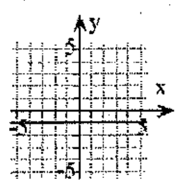
A third ordered pair (checkpoint) is ($\square$, -4).

Choose which graph represents the linear equation $x = -1$.

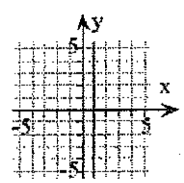
○ A.



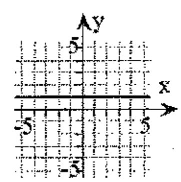
○ B.



○ C.



○ D.



Student: ____________________	**Instructor:** Darlene Ford	**Assignment:** Intercepts Quiz
Date: ____________________	**Course:** Algebra I Martin-Gay	
Time: ____________________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. For the following linear equation, find the x- and y- intercepts, along with a third checkpoint. Then, choose which graph represents the linear equation.

$3x + 8y = -3$

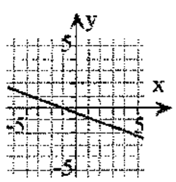
x-intercept = ☐
(Type an ordered pair, using reduced fractions if necessary. Do not use mixed numbers.)

y-intercept = ☐
(Type an ordered pair, using reduced fractions if necessary. Do not use mixed numbers.)

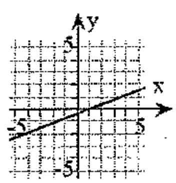
Complete the ordered pair to find a third checkpoint. (1, ☐)
(Type an integer or reduced fraction. Do not use mixed numbers.)

Choose which graph represents the linear equation $3x + 8y = -3$.

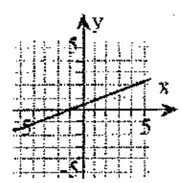
○ A.



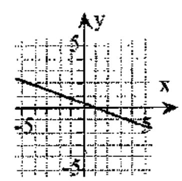
○ B.



○ C.



○ D.



Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts Quiz

1. $(4,0),(-4,0)$
   $(0,1),(0,-1)$

---

2. 1
   1
   1
   D

---

3. $(5,0)$
   $\left(0,-\frac{5}{7}\right)$
   $-\frac{4}{7}$
   C

---

4. $(4,0)$
   $(0,-1)$
   $-\frac{3}{4}$
   D

---

5. $(3,0)$
   $(0,4)$
   $\frac{8}{3}$
   A

---

6. $(0,0)$
   $\frac{1}{3}$
   $-\frac{1}{3}$
   B

---

7. $(-1,0)$
   N

---

8. $(3,0)$
   $(0,-3)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Intercepts Quiz

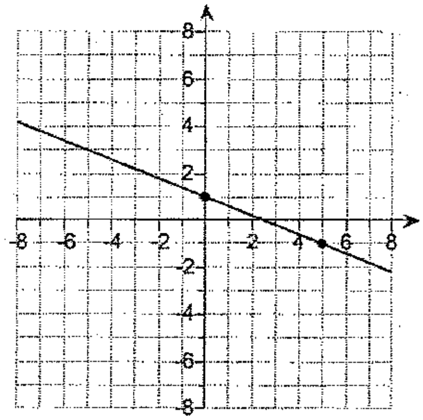
9. -1
   -1
   -1
   A

---

10. $(-1,0)$
    $\left(0,-\dfrac{3}{8}\right)$
    $-\dfrac{3}{4}$
    A

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Slope and Rate of Change Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Find the slope of the line if it exists.



m = ☐

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

---

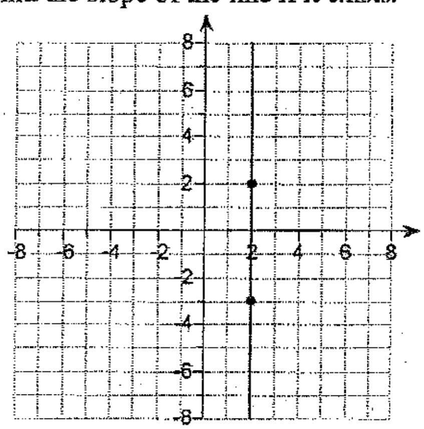
2. Determine whether the lines through each pair of points are parallel, perpendicular, or neither.

$(-2, -1)$ and $(5, 7)$ $(10, 8)$ and $(1, 10)$

- ○ Parallel
- ○ Perpendicular
- ○ Neither

---

3. Find the slope of the line if it exists.



m = ☐

(Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change Quiz

4. Determine whether the lines through each pair of points are parallel, perpendicular, or neither.

   $(-7, 1)$ and $(1, 8)$ $(9, -1)$ and $(2, 7)$

   - ○ Parallel
   - ○ Perpendicular
   - ○ Neither

5. Find the slope of the line that goes through the given points.

   $(-6, 2)$ and $(-10, 6)$

   m = ☐

   (Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

6. Find the slope of the line $x = 4$.

   m = ☐

   (Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

7. Find the slope of the line $y = 6$.

   m = ☐

   (Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

8. Find the slope of the line parallel to the line passing through the given points.

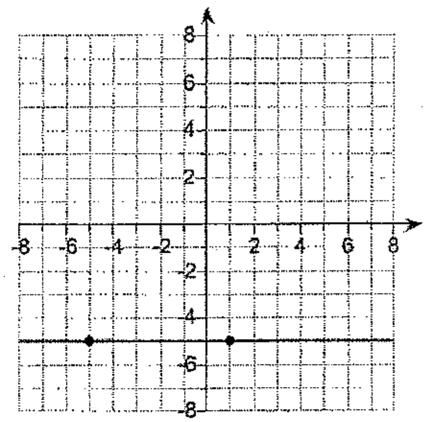
   $(1, -8)$ and $(-10, 4)$

   m = ☐

   (Type an integer or a fraction. Simplify your answer. Type N if the slope is undefined.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Slope and Rate of Change Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

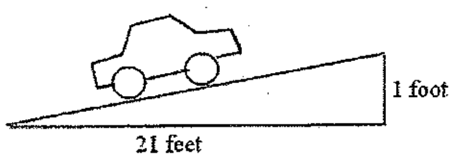
9. Find the slope of the line if it exists.



$m = \square$

(Simplify your answer. Type an integer or a fraction. Type N if the slope is undefined.)

10. The grade of a road is its slope written as a percent. Find the grade of the road shown.



The grade is $\square$%.

(Round to one decimal place as needed.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope and Rate of Change Quiz

1. $-\frac{2}{5}$

2. the third choice

3. N

4. the second choice

5. -1

6. N

7. 0

8. $-\frac{12}{11}$

9. 0

10. 4.8

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Slope Intercept Form Quiz

1. Find the equation of the line with y-intercept $\left(0, \frac{8}{9}\right)$ and slope of -5.

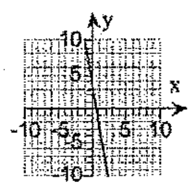
Enter the equation of the line in slope-intercept form:

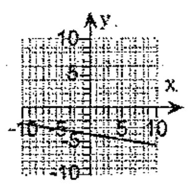
☐

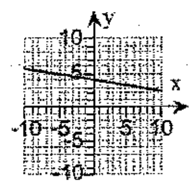
(Type an equation. Use integers or fractions for any numbers in the equation.)

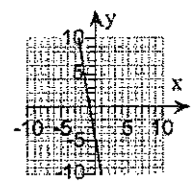
2. Use the slope-intercept form to graph the equation $y = -6x - 4$.

Choose the correct graph below.

○A.


○B.


○C.


○D.


3. Find the equation of the line with y-intercept $(0, -1)$ and slope of $\frac{1}{7}$.

Enter the equation of the line in slope-intercept form:

☐

(Type an equation. Use integers or fractions for any numbers in the equation.)

4. Find the slope and the y-intercept of the line whose equation is $y = 3$.

The slope is ☐.

The y-intercept is ☐. (Type an ordered pair.)

5. Find the slope and the y-intercept of the line whose equation is $6x + 5y = 30$.

The slope is ☐.

The y-intercept is ☐. (Type an ordered pair.)

Student: ____________	Instructor: Darlene Ford	Assignment: Slope Intercept Form Quiz
Date: ____________	Course: Algebra I Martin-Gay	
Time: ____________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

6. Determine whether the lines are parallel, perpendicular, or neither.

$-2+9x=2y$

$2x+7y=21$

Choose the correct answer below.

- ○ Parallel
- ○ Perpendicular
- ○ Neither

7. Find the slope and the y-intercept of the line whose equation is $-2x+y=3$.

The slope is $\square$.

The y-intercept is $\square$. (Type an ordered pair.)

8. Determine whether the lines are parallel, perpendicular or neither.

$5+6x=5y$

$5x+6y=-18$

Choose the correct answer below.

- ○ Parallel
- ○ Perpendicular
- ○ Neither

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Slope Intercept Form Quiz

9. Determine whether the lines are parallel, perpendicular, or neither.

$$-9x + 5y = -15$$

$$5y = 9x + 5$$

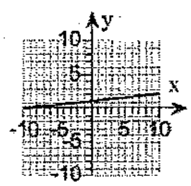
Choose the correct answer below.

- ○ Parallel
- ○ Perpendicular
- ○ Neither

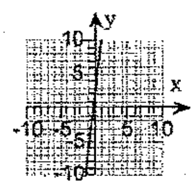
10. Use the slope-intercept form to graph the equation $-9x + y = -1$.

Choose the correct graph below.

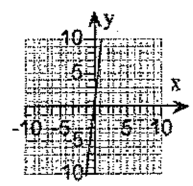
○A.



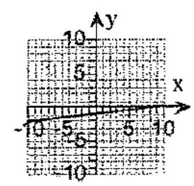
○B.



○C.



○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Slope Intercept Form Quiz

1. $y = -5x + \frac{8}{9}$

2. D

3. $y = \frac{1}{7}x - 1$

4. 0
   (0,3)

5. $-\frac{6}{5}$
   (0,6)

6. the third choice

7. 2
   (0,3)

8. the second choice

9. the first choice

10. C

Student: ______	Instructor: Darlene Ford	Assignment: Point Slope Form Quiz
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Find an equation perpendicular to $y = -1$ and passing through $(-8,4)$.

The equation is ☐. (Type your answer in standard form.)

2. Find an equation of the horizontal line through $(6, 6)$.

The equation is ☐. (Type your answer in standard form.)

3. Use the point-slope form of the linear equation to find an equation of each line with the given slope and passing through the given point. Then write the equation in standard form.

Slope $\frac{4}{5}$; through $(4, -4)$

The equation is ☐.
(Type your answer in standard form. Use integers for any numbers in the equation.)

4. Find an equation of the vertical line through $(8, -5)$.

The equation is ☐. (Type your answer in standard form.)

5. Find an equation of the line described. Write the equation in standard form.

Through $(9,7)$ and $(0,0)$

The equation is ☐.
(Type your answer in standard form. Use integers for any numbers in the equation.)

6. Use the point-slope form of the linear equation to find an equation of each line with the given slope and passing through the given point. Then write the equation in standard form.

Slope -9; through $(2, -5)$

The equation is ☐.
(Type your answer in standard form. Use integers for any numbers in the equation.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Point Slope Form Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

7. Find an equation of the line described. Write the equation in standard form.

Through $(0,0)$ with slope -2

The equation is $\square$.
(Type your answer in standard form. Use integers for any numbers in the equation.)

8. Find an equation of the line through the given points. Write the equation in standard form.

Through $(-3,6)$ and $(2,4)$

The equation is $\square$.
(Type your answer in standard form. Use integers for any numbers in the equation.)

9. Find an equation parallel to $x = 6$ and passing through $(7, -4)$.

The equation is $\square$. (Type your answer in standard form.)

10. In 2001 there were 6680 electric-powered vehicles in use in the United States. In 1998 only 4760 electric vehicles were being used. (*Source:* U.S. Energy Information Administration)

a. Assume that the relationship between time, x, and number of electric-powered vehicles, y, is linear. Write an equation in slope-intercept form describing this relationship. Use ordered pairs of the form (years past 1998, number of vehicles).

The equation is $\square$. (Type your answer in slope-intercept form.)

b. Use this equation to predict the number of electric-powered vehicles in use in 2010.

$\square$ vehicles

Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Point Slope Form Quiz

1. $x = -8$

2. $y = 6$

3. $4x - 5y = 36$

4. $x = 8$

5. $7x - 9y = 0$

6. $9x + y = 13$

7. $2x + y = 0$

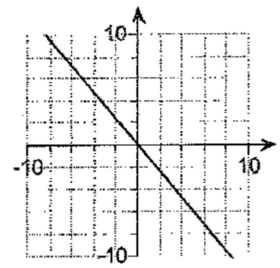
8. $2x + 5y = 24$

9. $x = 7$

10. $y = 640x + 4760$
    12,440

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Function Quiz

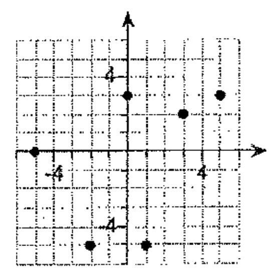
1. Find the domain and the range of the function graphed to the right.



The domain in interval notation is $\square$.

The range in interval notation is $\square$.

2. Use the vertical line test to determine whether the given graph is the graph of a function.



Is the graph the graph of a function?

- ○ Yes
- ○ No

3. Determine if the given relation is also a function.

$\{(-1,0),(-8,0),(-3,0)\}$

Is the relation a function?

- ○ No
- ○ Yes

Student: ____________	Instructor: Darlene Ford	Assignment: Function Quiz
Date: ____________	Course: Algebra I Martin-Gay	
Time: ____________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

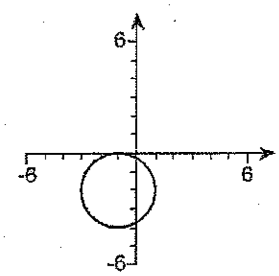
4. Decide whether the equation describes a function.

$x = -4$

Does the equation describe a function?

- ◯ Yes
- ◯ No

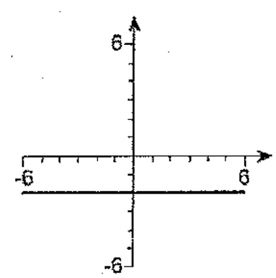
5. Use the vertical line test to determine whether the given graph is the graph of a function.



Is the graph the graph of a function? Choose the correct answer below.

- ◯ Yes
- ◯ No

6. Use the vertical line test to determine whether the given graph is the graph of a function.



Is the graph the graph of a function? Choose the correct answer below.

- ◯ Yes
- ◯ No

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Function Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

7. Determine if the given relation is also a function.

$\{(1,6), (5,-3), (2,9), (-5,3)\}$

Is the relation a function?

○ No

○ Yes

8. Given the following function, find $f(-4)$, $f(0)$, and $f(3)$.

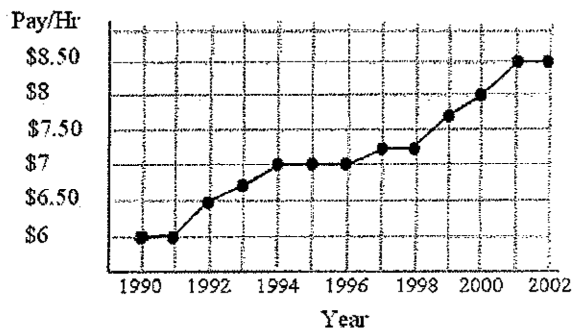
$f(x) = -4x - 5$

$f(-4) = \square$

$f(0) = \square$

$f(3) = \square$

9. The graph to the right shows Shawn's hourly pay rate at the beginning of each year shown. Use this graph to approximate the year when Shawn's pay rate increased to over \$6.25 per hour.



The year when Shawn's hourly pay rate increased to over \$6.25 per hour was $\square$.

10. Given the following function, find $f(-1)$, $f(0)$, and $f(4)$.

$f(x) = x^2 + 2$

$f(-1) = \square$

$f(0) = \square$

$f(4) = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Function Quiz

11. Decide whether the equation describes a function.

$y = 5x - 2$

Does the equation describe a function?

○ Yes

○ No

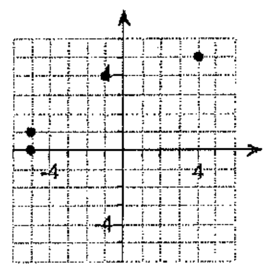
12. Find the domain and the range of the given relation.

$\{(9,-2),(7,-6),(0,8),(8,0)\}$

The domain is $\{\square\}$. (Use a comma to separate answers as needed.)

The range is $\{\square\}$. (Use a comma to separate answers as needed.)

13. Use the vertical line test to determine whether the given graph is the graph of a function.



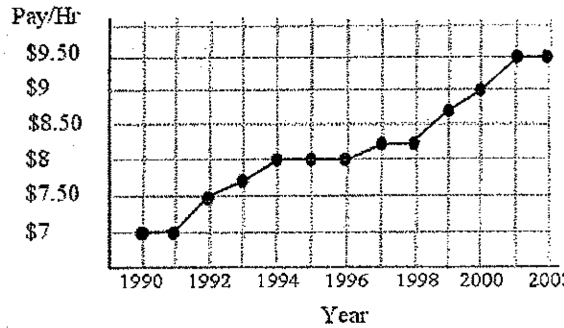
Is the graph the graph of a function?

○ Yes

○ No

Student: ________________	**Instructor:** Darlene Ford	**Assignment:** Function Quiz
Date: ________________	**Course:** Algebra I Martin-Gay	
Time: ________________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

14. The graph to the right shows Bill's hourly pay at the beginning of each year shown. Use this graph to approximate Bill's pay at the beginning of 1995.



Bill's hourly pay at the beginning of 1995 was $☐ per hour.

15. Find the domain of the given function.

$f(x) = 4x - 9$

The domain in interval notation is ☐.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Function Quiz

1. $(-\infty, \infty)$
   $(-\infty, \infty)$

2. the first choice

3. the second choice

4. the second choice

5. the second choice

6. the first choice

7. the second choice

8. 11
   -5
   -17

9. 1992

10. 3
    2
    18

11. the first choice

12. 9,7,0,8
    $-2, -6, 8, 0$

13. the second choice

14. 8.00

15. $(-\infty, \infty)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Graphing

1. Which of the ordered pairs is a solution of the given system?

$$\begin{cases} x + 7y = -2 \\ x + 6y = -2 \end{cases}$$

○ A. $(-9,1)$

○ B. $(-2,0)$

○ C. $(4,-1)$

Student: ______ Date: ______ Time: ______	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Solving Systems by Graphing

2.

Solve the system of equations by graphing. $\begin{cases} y = -3x - 1 \\ y = x + 3 \end{cases}$

Graph the equation $y = -3x - 1$ by finding the slope and y-intercept.

The slope is ☐.

The y-intercept is ☐.

Graph the equation $y = x + 3$ by finding the slope and y-intercept.

The slope is ☐.

The y-intercept is ☐.

The solution of the system is ☐.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Is the system consistent or inconsistent?

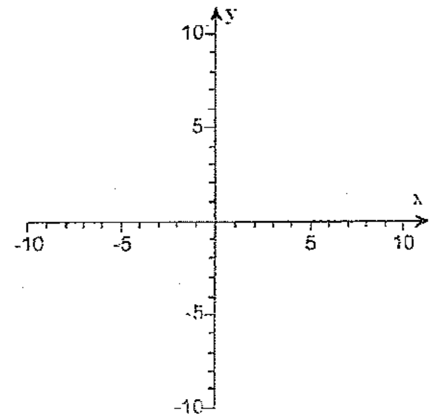
○ Inconsistent

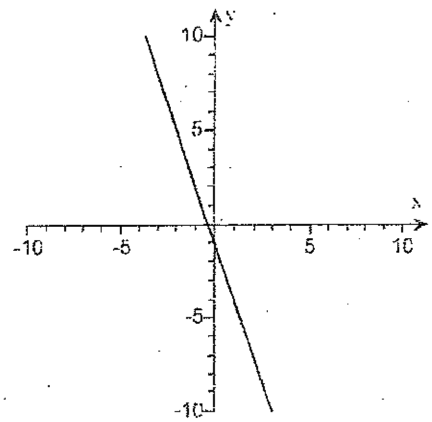
○ Consistent

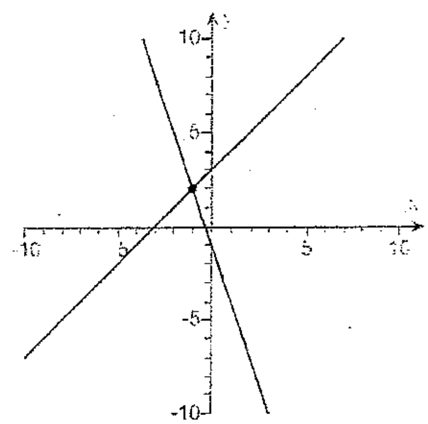
Are the equations dependent or independent?

○ Dependent

○ Independent







Student: ______	Instructor: Darlene Ford	Assignment: Solving Systems by Graphing
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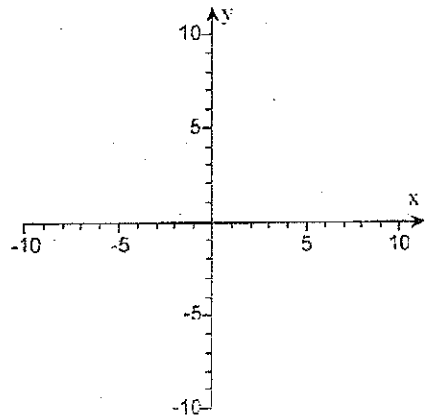
3.

Solve the system of equations by graphing. $\begin{cases} 2x + y = -5 \\ y = -1 \end{cases}$

Graph the equation $2x + y = -5$ by finding the slope and y-intercept.



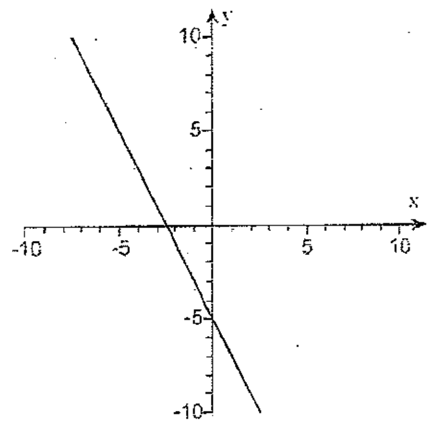
The slope is $\square$.

The y-intercept is $\square$.

Graph the equation $y = -1$ by finding the slope and y-intercept.

The slope is $\square$.

The y-intercept is $\square$.



The solution of the system is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Is the system consistent or inconsistent?

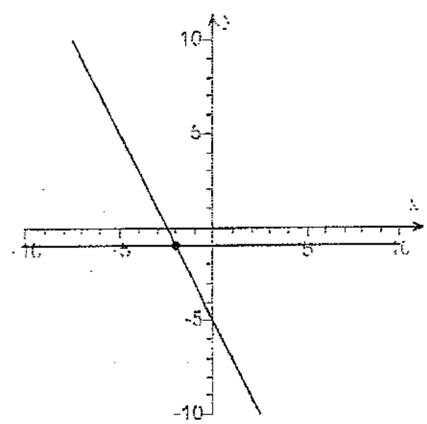
◯ Inconsistent

◯ Consistent

Are the equations dependent or independent?

◯ Dependent

◯ Independent



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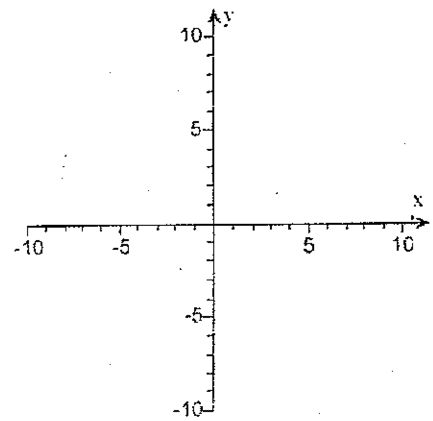
Assignment: Solving Systems by Graphing

4.

Solve the system of equations by graphing. $\begin{cases} x+y = -5 \\ x+y = 0 \end{cases}$

Graph the equation $x + y = -5$ by finding the slope and y-intercept.



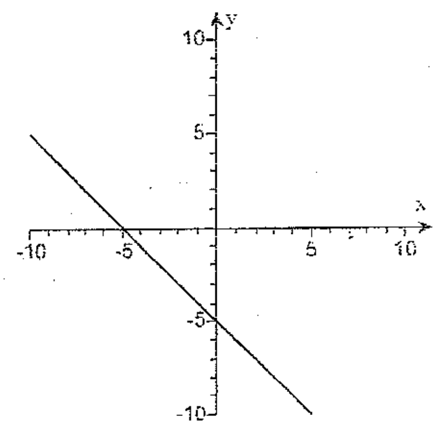
The slope is $\square$.

The y-intercept is $\square$.

Graph the equation $x + y = 0$ by finding the slope and y-intercept.

The slope is $\square$.

The y-intercept is $\square$.

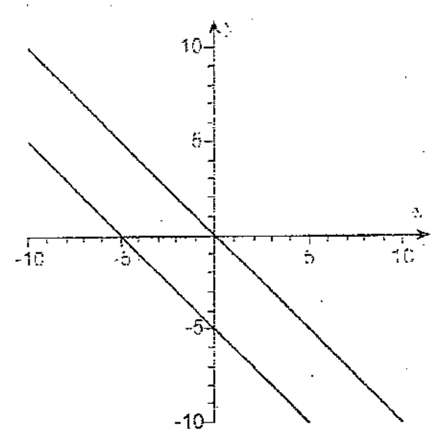


The solution of the system is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Is the system consistent or inconsistent?

- ◯ Consistent
- ◯ Inconsistent

Are the equations dependent or independent?



- ◯ Independent
- ◯ Dependent

Student: ____________________
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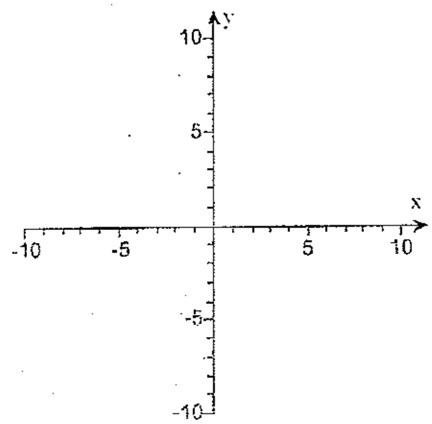
Assignment: Solving Systems by Graphing

5.

Solve the system of equations by graphing. $\begin{cases} y-4x = -5 \\ -12x+3y = -15 \end{cases}$

Graph the equation $y - 4x = -5$ by finding the slope and y-intercept.



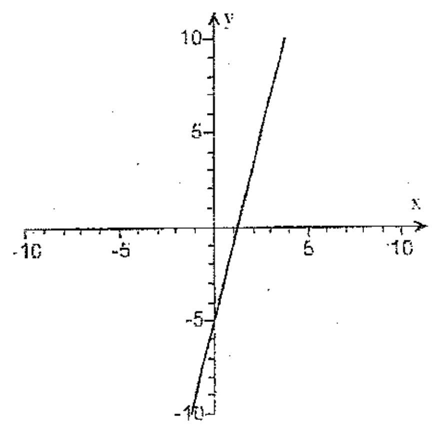
The slope is $\square$.

The y-intercept is $\square$.

Graph the equation $-12x+3y = -15$ by finding the slope and y-intercept.

The slope is $\square$.

The y-intercept is $\square$.



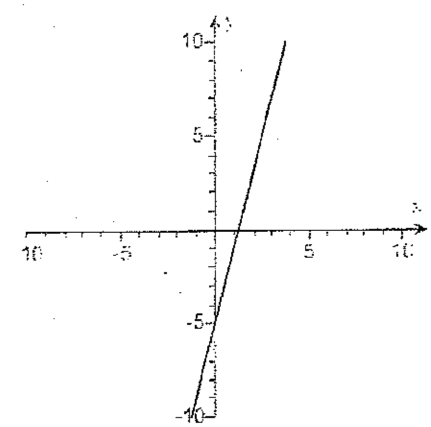
The solution of the system is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Is the system consistent or inconsistent?

- ◯ Consistent
- ◯ Inconsistent

Are the equations dependent or independent?

- ◯ Dependent
- ◯ Independent



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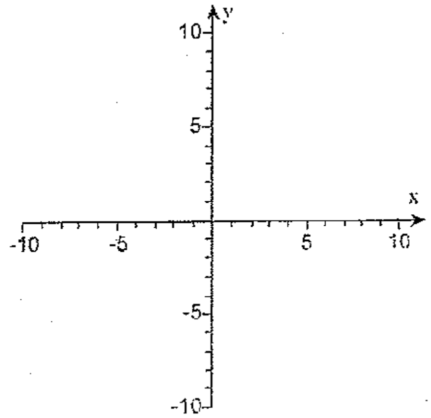
6. Solve the system of equations by graphing.

$$\begin{cases} x - 3y = 12 \\ -5x - 3y = 12 \end{cases}$$

Fill in the following table to find three points on the graph of the first equation in the system.

$x - 3y = 12$

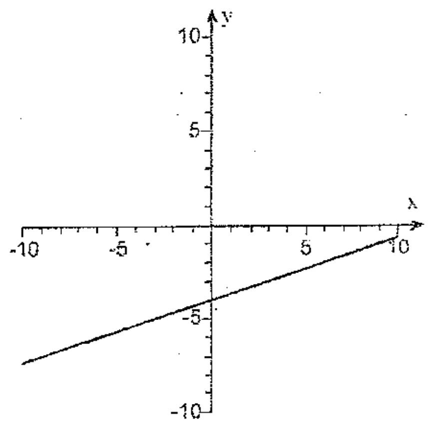
x	y
−1	☐
0	☐
1	☐



Fill in the following table to find three points on the graph of the second equation in the system.

$-5x - 3y = 12$

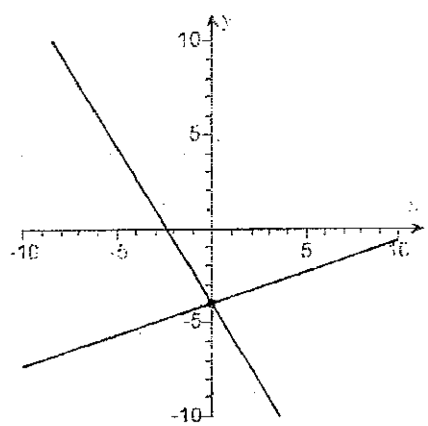
x	y
−1	☐
0	☐
1	☐



The solution of the system is ☐.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Is the system consistent or inconsistent?

- ◯ Inconsistent
- ◯ Consistent



Are the equations dependent or independent?

- ◯ Dependent
- ◯ Independent

Student: ____________	Instructor: Darlene Ford	Assignment: Solving Systems by Graphing
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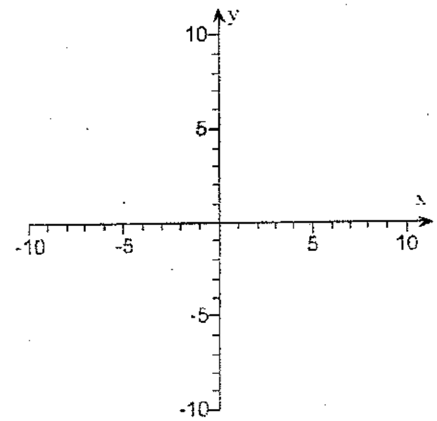
7.

Solve the system of equations by graphing. $\begin{cases} -\frac{1}{3}x + y = 1 \\ x = -3 \end{cases}$

Fill in the following table to find three points on the graph of the first equation in the system.

$-\frac{1}{3}x + y = 1$

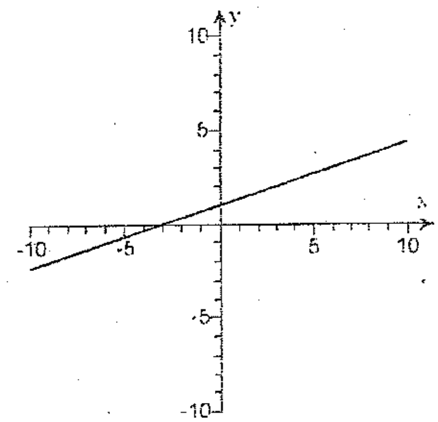
x	y
-3	$\square$
0	$\square$
3	$\square$



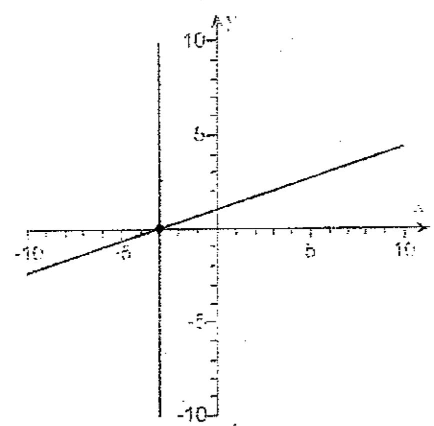
Fill in the following table to find three points on the graph of the second equation in the system.

$x = -3$

x	y
$\square$	-5
$\square$	0
$\square$	5



The solution of the system is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)



Is the system consistent or inconsistent?

- ◌ Inconsistent
- ◌ Consistent

Are the equations dependent or independent?

- ◌ Dependent
- ◌ Independent

8. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} -7x + y = 5 \\ x + 3y = -24 \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

9. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} -6x + y = -3 \\ 3y = 6 + 18x \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

10. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} x = 9 \\ y = 3 \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Graphing

1. B

2. -3
-1
1
3
$(-1,2)$
the second choice
the second choice

3. -2
-5
0
-1
$(-2,-1)$
the second choice
the second choice

4. -1
-5
-1
0
N
the second choice
the first choice

5. 4
-5
4
-5
I
the first choice
the first choice

6. $-\frac{13}{3}$
-4
$-\frac{11}{3}$
$-\frac{7}{3}$
-4
$-\frac{17}{3}$
$(0, -4)$
the second choice
the second choice

7. 0
1
2
-3
-3
-3
$(-3,0)$
the second choice
the second choice

8. the third choice
the second choice

9. the second choice
the first choice

10. the third choice
the second choice

Student: ______________________
Date: ______________________
Time: ______________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Solving Systems by Substitution

1. Solve the system of equations by the substitution method.

$$\begin{cases} 2x + 3y = 1 \\ x = 3y - 4 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

2. Solve the system of equations by the substitution method.

$$\begin{cases} y = 2x + 2 \\ 4y - 6x = 6 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

3. Solve the system of equations by the substitution method.

$$\begin{cases} x - 2y = 1 \\ 3x - 7y = 2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

4. Solve the system of equations by the substitution method.

$$\begin{cases} \frac{1}{4}x - y = 1 \\ x + 4y = 4 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Substitution

5. Solve the system of equations by the substitution method.

$$\begin{cases} 2x + 3y = -3 \\ -2x = y - 3 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

6. Solve the system of equations by the substitution method.

$$\begin{cases} -2x - y = 9 \\ -4x - 4y = 16 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

7. Solve the system of equations by the substitution method.

$$\begin{cases} 6x - 18y = 18 \\ 2x - 4y = 8 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

8. Solve the system of equations by the substitution method.

$$\begin{cases} 7x + 28y = 28 \\ 9x + 36y = 54 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

9. Solve the system of equations by the substitution method.

$$\begin{cases} y = 2x + 6 \\ y = 8x - 1 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Substitution

1. $(-1,1)$

2. $(-1,0)$

3. $(3,1)$

4. I

5. $(3,-3)$

6. $(-5,1)$

7. $(6,1)$

8. N

9. $\left(\frac{7}{6},\frac{25}{3}\right)$

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Solving Systems by Elimination/ Addition

1. Solve the system of equations by the addition method.

$$\begin{cases} -9x - y = 9 \\ 4x + y = 1 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

2. Solve the system of equations by the addition method.

$$\begin{cases} x - y = 7 \\ x + y = 5 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

3. Solve the system of equations by the addition method.

$$\begin{cases} 3x + y = -11 \\ -12x - 4y = -20 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

4. Solve the system of equations by the addition method.

$$\begin{cases} -2x + y = 1 \\ 6x - 3y = -3 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

5. Solve the system of equations by the addition method.

$$\begin{cases} 5x + y = -6 \\ -7x - 4y = 24 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ______________________
Date: ______________________
Time: ______________________

Instructor: Darlene Ford
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Assignment: Solving Systems by Elimination: Addition

6. Solve the system of equations by the addition method.

$$\begin{cases} x + 2y = -7 \\ 5x - 2y = 25 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

7. Solve the system of equations by the addition method.

$$\begin{cases} -5x + 2y = 13 \\ 3x - 3y = -15 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

8. Solve the system of equations by the addition method.

$$\begin{cases} \dfrac{x}{5} + \dfrac{y}{15} = -2 \\[2mm] \dfrac{x}{2} - \dfrac{y}{6} = 2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

9. Solve the system of equations by the addition method.

$$\begin{cases} 4x = 3y - 7 \\ -8x + 4y - 6 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Simplify your answer. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Elimination/ Addition

1. $(-2,9)$

2. $(6,-1)$

3. N

4. I

5. $(0,-6)$

6. $(3,-5)$

7. $(-1,4)$

8. $(-3,-21)$

9. $\left(\frac{5}{4},4\right)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving with Systems

1. One number is two more than a second number. Five times the first is 13 less than 6 times the second. Find the numbers.

   The value of the second number is ☐

   The value of the first number is ☐.

2. The total length of two boats is 3667 feet. The difference in their lengths is 17 feet. Find the lengths of each boat.

   The length of the longer boat is ☐ ft.

   The length of the shorter boat is ☐ ft.

3. Christine went shopping and bought each of her nine nephews a gift, either a video costing \$14.95 or a CD costing \$16.88. She spent \$149.99 on the gifts. How many videos and how many CDs did she buy?

   She bought ☐ videos and ☐ CDs.

4. Using data for the years 1985 to 1990, the function $y = 6x + 14$ can be used to estimate the first trend, while the function $y = 0.8x + 32$ can be used to estimate the second trend. For both functions, x is the number of years since 1985. If these trends continue, in what year are the two trends equal?

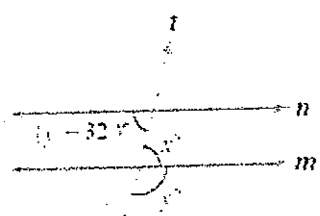
   The trends are equal in ☐.

5. At a concession stand, five hot dog(s) and four hamburger(s) cost \$14.75; four hot dog(s) and five hamburger(s) cost \$14.50. Find the cost of one hot dog and the cost of one hamburger.

   What is the cost of one hot dog? \$☐

   What is the cost of one hamburger? \$☐

6. In the figure (not to scale), line m and line n are parallel lines cut by transversal t. The value of x is 32 degrees less than the value of y. Find the values of x and y.



   The angle y has the value ☐.

   The angle x has the value ☐.

7. In triangle ABC, the measure of angle B is 20° more than three times the measure of angle A. The measure of angle C is 55° more than the measure of angle A. Find the measure of each angle.

What is the measure of angle A? ☐°

What is the measure of angle B? ☐°

What is the measure of angle C? ☐°

8. The sum of the digits of a three-digit number is 9. The tens-place digit is three times the hundreds-place digit, and the ones-place digit is 1 less than the hundreds-place digit. Find the three-digit number.

The number is ☐.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Problem Solving with Systems

1. 23
   25

2. 1842
   1825

3. 1
   8

4. 1988

5. 1.75
   1.50

6. 106
   74

7. 21
   83
   76

8. 261

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay Beginning & Intermediate Algebra, 3e

Assignment: Solving Systems by Graphing Quiz

1. Which of the ordered pairs is a solution of the given system?

$$\begin{cases} -2x+7y = -43 \\ 5x+7y = -15 \end{cases}$$

- ○ A. $(11,-3)$
- ○ B. $(4,-5)$
- ○ C. $(11,-10)$

2. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} -3x+y = 8 \\ -x+3y = -15 \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Graphing Quiz

3. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} -4x + y = -3 \\ 4y = -16 + 16x \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

4. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} x = -6 \\ y = -7 \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

5. Without graphing, answer the questions for the system of equations below.

$$\begin{cases} 15y - 6x = 45 \\ 5y - 15 = 2x \end{cases}$$

a. Are the graphs of the given equations identical lines, parallel lines, or lines intersecting at a single point?

- ○ Identical lines
- ○ Parallel lines
- ○ Intersecting lines

b. How many solutions does the system have?

- ○ No solutions
- ○ One solution
- ○ Infinite solutions

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Graphing Quiz

1. B

2. the third choice
   the second choice

3. the second choice
   the first choice

4. the third choice
   the second choice

5. the first choice
   the third choice

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Substitution Quiz

1. Solve the system of equations by the substitution method.

$$\begin{cases} 8x - 32y = 8 \\ 3x - 9y = -3 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

2. Solve the system of equations by the substitution method.

$$\begin{cases} x + 3y = 4 \\ 2x + 5y = 6 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

3. Solve the system of equations by the substitution method.

$$\begin{cases} 3x - y = 2 \\ 5x - 3y = 2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

4. Solve the system of equations by the substitution method.

$$\begin{cases} -3x - 2y = -3 \\ 2x = y + 9 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

5. Solve the system of equations by the substitution method.

$$\begin{cases} y = 4x + 2 \\ 4y - 12x = 16 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

6. Solve the system of equations by the substitution method.

$$\begin{cases} 2x + 4y = -16 \\ 7x + 14y = 28 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

7. Solve the system of equations by the substitution method.

$$\begin{cases} 5x + 2y = 2 \\ x = 3y - 3 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

8. Solve the system of equations by the substitution method.

$$\begin{cases} y = 3x + 4 \\ y = 7x + 1 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type integers or simplified fractions. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ______	**Instructor:** Darlene Ford
Date: ______	**Course:** Algebra I Martin-Gay
Time: ______	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e
	Assignment: Solving Systems by Substitution Quiz

1. $(-7,-2)$

2. $(-2,2)$

3. $(1,1)$

4. $(3,-3)$

5. $(2,10)$

6. N

7. $(0,1)$

8. $\left(\frac{3}{4},\frac{25}{4}\right)$

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Solving Systems by Elimination/Addition Quiz

1. Solve the system of equations by the addition method.

$$\begin{cases} -9x + y = -7 \\ -8x - y = -10 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

2. Solve the system of equations by the addition method.

$$\begin{cases} x - y = -10 \\ x + y = -2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

3. Solve the system of equations by the addition method.

$$\begin{cases} x + 2y = -5 \\ -5x + 7y = 42 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

4. Solve the system of equations by the addition method.

$$\begin{cases} -2x + y = 17 \\ 8x - 4y = -16 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

5. Solve the system of equations by the addition method.

$$\begin{cases} -2x + y = -7 \\ -4x - 2y = -2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

6. Solve the system of equations by the addition method.

$$\begin{cases} -3x + y = 1 \\ 6x - 2y = -2 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

7. Solve the system of equations by the addition method.

$$\begin{cases} -4x + 2y = 38 \\ 5x - 3y = -50 \end{cases}$$

The solution is $\square$.
(Type an ordered pair. Type N if there is no solution. Type I if there are infinitely many solutions.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Systems by Elimination/Addition Quiz

1. (1,2)

2. $(-6, 4)$

3. $(-7, 1)$

4. N

5. $(2, -3)$

6. I

7. $(-7, 5)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents

1. Evaluate the expression.

-9^2

$-9^2 = \square$

2. Evaluate the expression.

$(-1)^3$

$(-1)^3 = \square$

3. Evaluate the expression.

$\left(\frac{1}{3}\right)^2$

$\left(\frac{1}{3}\right)^2 = \square$

4. Evaluate the expression.

$-1 \cdot 2^2$

$-1 \cdot 2^2 = \square$

5. Evaluate the expression for the given value of x.

$2x^2;\ x = 3$

The expression evaluates to $\square$.

6. Use the product rule to simplify the expression.

$x^2 \cdot x$

$x^2 \cdot x = \square$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents

7. Use the product rule to simplify the expression.

$(8z^2)(-9z^4)$

$(8z^2)(-9z^4) = \square$

---

8. Use the power rule, the power of a product rule, and the power of a quotient rule to simplify the expression.

$\left(\frac{7xz}{y^2}\right)^3$

$\left(\frac{7xz}{y^2}\right)^3 = \square$

---

9. Use the quotient rule to simplify the expression.

$\frac{p^5q^5}{pq^2}$

$\frac{p^5q^5}{pq^2} = \square$

---

10. Simplify the expression.

$(4x)^0$

$(4x)^0 = \square$

---

11. Simplify the expression.

$3x^0$

$3x^0 = \square$

Student: ____________
Date: ____________
Time: ____________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Rules of Exponents

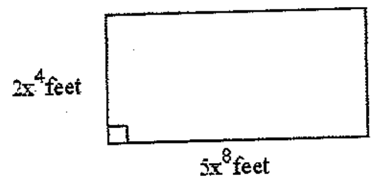
12. Simplify the expression.

$$\frac{(x^6)^6 \cdot x^9}{x^4}$$

$$\frac{(x^6)^6 \cdot x^9}{x^4} = \square$$

---

13. Find the area of the rectangle.



The area of the rectangle is $\square$ square feet. (Simplify your answer.)

Student: __________ **Date:** __________ **Time:** __________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents

1. -81

2. -1

3. $\frac{1}{9}$

4. -4

5. 18

6. x^3

7. $-72z^6$

8. $\frac{343x^3z^3}{y^6}$

9. p^4q^3

10. 1

11. 3

12. x^{41}

13. $10x^{12}$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions - Add - Subtract

1. Find the degree of the given term.

   56

   The degree is $\square$.

---

2. Find the degree of the given term.

   $-mn^5$

   The degree is $\square$.

---

3. Classify the polynomial as a monomial, binomial, trinomial, or none of these. Also, give the degree.

   $x^2 - 12x + 36$

   Choose the correct type of polynomial.

   ○ Monomial　　○ Trinomial

   ○ Binomial　　○ None of these

   What is the degree of the polynomial?

   The degree is $\square$.

---

4. Classify the polynomial as a monomial, binomial, trinomial, or none of these. Also, give the degree.

   58

   Choose the correct type of polynomial.

   ○ Trinomial　　○ Monomial

   ○ Binomial　　○ None of these

   What is the degree of 58?

   The degree is $\square$.

5. Identify whether the polynomial is a monomial, binomial, trinomial, or none of these. Then, determine the degree of the polynomial.

$$2p^4m^5 - 3pm^4 + 5p^2m^3 - 2p^5m^4$$

Choose the correct type of polynomial.

○ Monomial ○ Binomial

○ Trinomial ○ None of these

What is the degree of $2p^4m^5 - 3pm^4 + 5p^2m^3 - 2p^5m^4$?

The degree is ☐.

6. For the polynomial function P(x), find P(2).

$$P(x) = 2x^2 - 8x + 8$$

$P(2) =$ ☐ (Simplify your answer. Type an integer or a fraction.)

7. For the polynomial function P(x), find P(−1).

$$P(x) = 6x^2 - 3x + 5$$

$P(-1) =$ ☐ (Simplify your answer. Type an integer or a fraction.)

8. If $P(x) = x^2 + x + 1$ and $Q(x) = 2x^2 + 7$, find the following.

$$P\left(\frac{2}{5}\right),\ Q\left(\frac{1}{4}\right)$$

$P\left(\frac{2}{5}\right) =$ ☐ (Type an integer or a simplified fraction.)

$Q\left(\frac{1}{4}\right) =$ ☐ (Type an integer or a simplified fraction.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions - Add - Subtract

9. The height of an object in feet at time t seconds is given by the polynomial function $P(t) = -18t^2 + 1759$.

   Find the height of the object at $t = 6$ seconds.

   When $t = 6$ seconds, the height of the object is $\square$ feet.

10. Simplify by combining like terms.

    $y + 12y$

    $y + 12y = \square$

11. Simplify by combining like terms.

    $-7xy - 2x - 4xy + 7$

    $-7xy - 2x - 4xy + 7 = \square$

12. Simplify by combining like terms.

    $-5xy^2 + 3x - x + 9xy^2$

    $-5xy^2 + 3x - x + 9xy^2 = \square$

13. Perform the indicated operation.

    Add $(-5x^2 + 3xy + 10y^2)$ and $(-7x^2 + 4xy + 10y^2)$.

    The answer is $\square$.

14. Perform the indicated operation.

    Subtract $(-6x^2 + 10x)$ from $(11x^2 + 5x)$.

    The difference between the two polynomials is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions - Add - Subtract

1. 0

2. 6

3. the second choice
   2

4. the second choice
   0

5. the fourth choice
   9

6. 0

7. 14

8. $\frac{39}{25}$
   $\frac{57}{8}$

9. 1111

10. 13y

11. $-11xy-2x+7$

12. $4xy^2+2x$

13. $-12x^2+7xy+20y^2$

14. $17x^2-5x$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions- Add - Subtract 2

1. Perform the indicated operation.

$$(5x^3+4x-3)+(-12x^3-6x-8x)$$

$(5x^3+4x-3)+(-12x^3-6x-8x)=\square$

---

2. Perform the indicated operation.

$$(3x^3+2x^2-3x-7)-(-11x^3+12x^2+8x+8)$$

$(3x^3+2x^2-3x-7)-(-11x^3+12x^2+8x+8)=\square$

---

3. Perform the indicated operation.

$$(4x^2-2)+(-12x^2-3x-7)$$

$(4x^2-2)+(-12x^2-3x-7)=\square$

---

4. Perform the indicated operation.

$$(-11x^2y-6)-(7x^2y+y)$$

$(-11x^2y-6)-(7x^2y+y)=\square$

---

5. Add the following polynomials.

$$\begin{array}{r} -5x^2+4x \\ +\ \ -8x^2+4x-7 \\ \hline \end{array}$$

The sum is $\square$. (Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions- Add - Subtract 2

6. Perform the indicated operation.

$$\left(\frac{1}{5}x^2+\frac{7}{6}x^2y+2y^3\right)+\left(-\frac{3}{5}x^2+\frac{4}{7}x^2y^2+5y^3\right)$$

The sum is $\square$.

(Use integers or fractions for any numbers in the expression. Simplify your answer.)

---

7. A projectile is fired upward from the ground with an initial velocity of 787 feet per second. Assume that the height of the projectile at any time t can be described by the polynomial function $P(t) = -16t^2 + 787t$. Find the height of the projectile at each given time.

a. What is the height of the projectile at $t = 3$ seconds?

$\square$ ft

b. What is the height of the projectile at $t = 6$ seconds?

$\square$ ft

c. What is the height of the projectile at $t = 9$ seconds?

$\square$ ft

d. What is the height of the projectile at $t = 11$ seconds?

$\square$ ft

e. Explain why the height changes as time passes.

- A. As t increases, a polynomial of degree 2, and a positive coefficient of t^2, increases, reaches a maximum, and then decreases.
- B. As t increases, a polynomial of degree 2, and a negative coefficient of t^2, decreases, reaches a minimum, and then increases.
- C. As t increases, a polynomial of degree 2, and a positive coefficient of t^2, decreases, reaches a minimum, and then increases.
- D. As t increases, a polynomial of degree 2, and a negative coefficient of t^2, increases, reaches a maximum, and then decreases.
- E. None of the above.

f. Approximate (to the nearest second) how long before the object hits the ground.

$\square$ sec

(Type a whole number.)

Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions- Add - Subtract 2

8. The polynomial function $P(x) = 45x - 90{,}000$ models the relationship between the number of computer briefcases x that a company sells and the profit the company makes, $P(x)$. Find $P(4000)$, the profit from selling 4000 computer briefcases.

$P(4000) = \$\square$

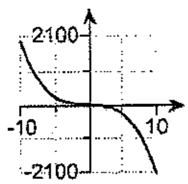
---

9. Match the equation with its graph.

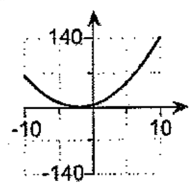
$f(x) = 2x^3 + x^2 + 4x + 3$

Choose the correct graph below.

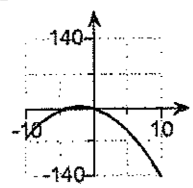
○A.



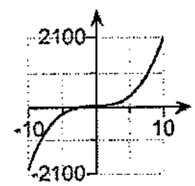
○B.



○C.



○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions- Add - Subtract 2

1. $-7x^3 - 10x - 3$

2. $14x^3 - 10x^2 - 11x - 15$

3. $-8x^2 - 3x - 9$

4. $-18x^2y - y - 6$

5. $-13x^2 + 8x - 7$

6. $-\frac{2}{5}x^2 + \frac{4}{7}x^2y^2 + \frac{7}{6}x^2y + 7y^3$

7. 2217
   4146
   5787
   6721
   D
   49

8. 90,000

9. D

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Multiplying Polynomials
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

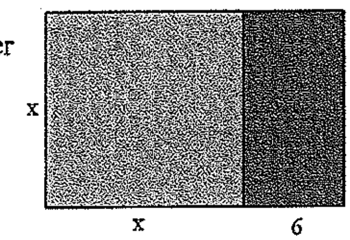
1. Find the following product.

$$2x(x^2+2x-9)$$

$2x(x^2+2x-9)=\square$

---

2. The area of the larger rectangle to the right is $x(x+6)$. Find another expression for this area by finding the sum of the areas of the smaller rectangles.



The area is $\square$.

---

3. Find the following product.

$$(6y-2)^2$$

$(6y-2)^2=\square$

---

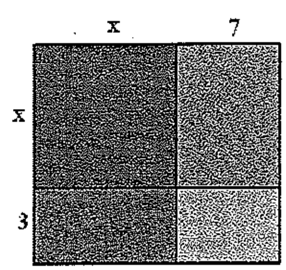
4. Find the following product.

$$(8x+3y)(3x-5y)$$

$(8x+3y)(3x-5y)=\square$

---

5. The area of the figure to the right is $(x+3)(x+7)$. Find another expression for this area by finding the sum of the areas of the smaller rectangles.



The area is $\square$.

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Multiplying Polynomials

6. Find the following product.

$$(3a-8)(6a^2+5a-1)$$

$(3a-8)(6a^2+5a-1) = \square$

---

7. Find the following product.

$$(4x+2y)(4x-2y)$$

$(4x+2y)(4x-2y) = \square$

---

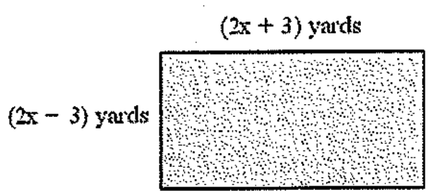
8. Perform the indicated operation.

$$(-6y^2)^3$$

$(-6y^2)^3 = \square$

---

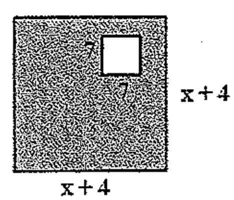
9. Find the area of the rectangle.



The area is ($\square$) square yards.

---

10. Write a polynomial that describes the area of the shaded region.



The area is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Multiplying Polynomials

1. $2x^3 + 4x^2 - 18x$

2. $x^2 + 6x$

3. $36y^2 - 24y + 4$

4. $24x^2 - 31xy - 15y^2$

5. $x^2 + 10x + 21$

6. $18a^3 - 33a^2 - 43a + 8$

7. $16x^2 - 0xy - 4y^2$

8. $-216y^6$

9. $4x^2 - 9$

10. $x^2 + 8x - 33$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products

1. Find the product using the FOIL method.

$$(x-10)(x+1)$$

$(x-10)(x+1)=\square$

---

2. Find the product using the FOIL method.

$$(5x+8)(7x-2)$$

$(5x+8)(7x-2)=\square$

---

3. Find the product.

$$(x-2)^2$$

$(x-2)^2=\square$

---

4. Find the product.

$$(4x+3)^2$$

$(4x+3)^2=\square$

---

5. Find the product.

$$(2x-1)(2x+1)$$

$(2x-1)(2x+1)=\square$

---

6. Find the product.

$$(9x-4)^2$$

$(9x-4)^2=\square$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products

7. Find the product.

$$(4x-7z)(4x+7z)$$

$(4x-7z)(4x+7z)=\square$

---

8. Find the product.

$$7(x-9)^2$$

$7(x-9)^2=\square$

---

9. Find the product using the FOIL method.

$$(9d+8)(5d-9)$$

$(9d+8)(5d-9)=\square$

---

10. Find the product.

$$(8x-3y)^2$$

$(8x-3y)^2=\square$

---

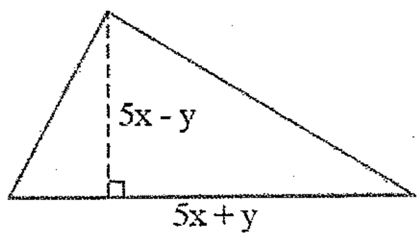
11. Simplify.

$$\frac{25a^{10}b^6}{-5a^2b^4}$$

$\dfrac{25a^{10}b^6}{-5a^2b^4}=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products

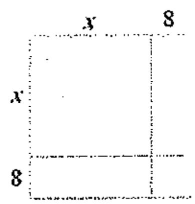
12. Find the area of the triangle.



The area is ☐.
(Simplify your answer. Use integers or fractions for any numbers in the expression.)

---

13. Find the area of the outer square.



The area is ☐.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products

1. $x^2 - 9x - 10$

2. $35x^2 + 46x - 16$

3. $x^2 - 4x + 4$

4. $16x^2 + 24x + 9$

5. $4x^2 - 1$

6. $81x^2 - 72x + 16$

7. $16x^2 - 49z^2$

8. $7x^2 - 126x + 567$

9. $45d^2 - 41d - 72$

10. $64x^2 - 48xy + 9y^2$

11. $-5a^8b^2$

12. $\frac{25x^2}{2} - \frac{y^2}{2}$

13. $x^2 + 16x + 64$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

1. Simplify the following expression.

$$2^{-3}$$

$2^{-3} = \square$ (Type a simplified fraction.)

2. Simplify the following expression.

$$(-5)^{-2}$$

$(-5)^{-2} = \square$ (Type a simplified fraction.)

3. Simplify the following expression using positive exponents only.

$$2x^{-2}$$

$2x^{-2} = \square$ (Simplify your answer.)

4. Simplify the following expression.

$$\left(-\frac{1}{9}\right)^{-4}$$

$\left(-\frac{1}{9}\right)^{-4} = \square$ (Type an integer or a fraction.)

5. Simplify the following expression.

$$9^{-1} + 8^{-1}$$

$9^{-1} + 8^{-1} = \square$ (Type a simplified fraction.)

6. Simplify the following expression using positive exponents only.

$$\frac{1}{p^{-4}}$$

$\frac{1}{p^{-4}} = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

7. Simplify the following expression using positive exponents only.

$$\frac{p^{-2}}{q^{-8}}$$

$\frac{p^{-2}}{q^{-8}} = \square$ (Simplify your answer.)

8. Simplify the following expression using positive exponents only.

$$\frac{r}{r^{-3}r^{-6}}$$

$\frac{r}{r^{-3}r^{-6}} = \square$

9. Simplify the following expression using positive exponents only.

$$(x^8y^6)^{-2}$$

$(x^8y^6)^{-2} = \square$

10. Simplify the following expression using positive exponents only.

$$\frac{(a^6)^6}{(a^7)^9}$$

$\frac{(a^6)^6}{(a^7)^9} = \square$

11. Simplify the following expression using positive exponents only.

$$\frac{-27a^6b}{9ab^4}$$

$\frac{-27a^6b}{9ab^4} = \square$ (Simplify your answer.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

12. Simplify the following expression using positive exponents only.

$$(-6x^2y^{-5})(6x^{-3}y^7)$$

$(-6x^2y^{-5})(6x^{-3}y^7) = \square$

13. Simplify the following expression using positive exponents only.

$$\frac{6ab^{-9}}{6^{-3}a^{-3}b^{-8}}$$

$\frac{6ab^{-9}}{6^{-3}a^{-3}b^{-8}} = \square$

14. Write the following number in scientific notation.

451,000

$451{,}000 = \square$
(Use the multiplication symbol in the math palette as needed.)

15. Write the following number in scientific notation.

0.00118

$0.00118 = \square$
(Use the multiplication symbol in the math palette as needed.)

16. Write the following number in standard notation.

1.268×10^{-5}

$1.268 \times 10^{-5} = \square$

17. Write the following number in standard notation.

9.337×10^2

$9.337 \times 10^2 = \square$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

18. Evaluate the following expression using exponential rules. Write the result in standard notation.

$$(8.1 \times 10^{-7})(3 \times 10^{-1})$$

$$(8.1 \times 10^{-7})(3 \times 10^{-1}) = \square$$

---

19. Evaluate the following expression using exponential rules. Write the result in standard notation.

$$\frac{0.3 \times 10^{-3}}{1 \times 10^{-1}}$$

$$\frac{0.3 \times 10^{-3}}{1 \times 10^{-1}} = \square$$

---

20. Simplify the following expression. Write the result in standard notation.

$$(4.73 \times 10^{7})(8.3 \times 10^{-5})$$

$$(4.73 \times 10^{7})(8.3 \times 10^{-5}) = \square$$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

1. $\frac{1}{8}$

2. $\frac{1}{25}$

3. $\frac{2}{x^2}$

4. 6561

5. $\frac{17}{72}$

6. p^4

7. $\frac{q^8}{p^2}$

8. r^{10}

9. $\frac{1}{x^{16}y^{12}}$

10. $\frac{1}{a^{27}}$

11. $-\frac{3a^5}{b^3}$

12. $-\frac{36y^2}{x}$

13. $\frac{1296a^4}{b}$

14. 4.51×10^5

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation

15. 1.18×10^{-3}

16. 0.00001268

17. 933.7

18. 0.000000243

19. 0.003

20. 3,925.9

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Division of Polynomials

1. Divide.

$$\frac{6p^4+3p^3}{3p}$$

$$\frac{6p^4+3p^3}{3p}=\square$$

2. Divide.

$$\frac{x^2+7x+10}{x+2}$$

$$\frac{x^2+7x+10}{x+2}=\square$$

3. Divide.

$$\frac{9x^2+68x+35}{x+7}$$

$$\frac{9x^2+68x+35}{x+7}=\square$$

4. Divide.

$$\frac{5x^2-18x+1}{x-4}$$

$$\frac{5x^2-18x+1}{x-4}=\square$$

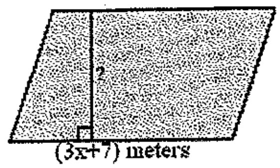
5. Divide.

$$\frac{8x^2+6x-20}{4x-5}$$

$$\frac{8x^2+6x-20}{4x-5}=\square$$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Division of Polynomials

6. The area of the parallelogram pictured to the right is $12x^2+31x+7$ square meters. If its base is $(3x+7)$ meters, find its height.



The height is $\square$ meters.

7. Divide.

$$\frac{3x^2+8x-1}{x+2}$$

$$\frac{3x^2+8x-1}{x+2}=\square$$

8. Divide.

$$\frac{49x^2-36}{7x-6}$$

$$\frac{49x^2-36}{7x-6}=\square$$

9. Divide.

$$\frac{x^3-125}{x-5}$$

$$\frac{x^3-125}{x-5}=\square$$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Division of Polynomials

1. $2p^3 + p^2$

2. $x + 5$

3. $9x + 5$

4. $5x + 2 + \dfrac{9}{x - 4}$

5. $2x + 4$

6. $4x + 1$

7. $3x + 2 - \dfrac{5}{x + 2}$

8. $7x + 6$

9. $x^2 + 5x + 25$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents Quiz

1. Simplify the expression.

$$-6x^0$$

$-6x^0 = \square$

2. Use the product rule to simplify the expression.

$$(2x^2)\,(2x^5)$$

$(2x^2)\,(2x^5) = \square$

3. Use the product rule to simplify the expression.

$$z^3 \cdot z^4$$

$z^3 \cdot z^4 = \square$

4. Evaluate the expression.

$$-1^2$$

$-1^2 = \square$

5. Evaluate the expression.

$$\left(\frac{1}{3}\right)^3$$

$\left(\frac{1}{3}\right)^3 = \square$

6. Simplify the expression.

$$\frac{(x^2)^3 \cdot x^6}{x^2}$$

$\frac{(x^2)^3 \cdot x^6}{x^2} = \square$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents Quiz

7. Evaluate the expression.

$$(-1)^3$$

$(-1)^3 = \square$

---

8. Use the quotient rule to simplify the expression.

$$\frac{p^5q^6}{p^3q^2}$$

$\frac{p^5q^6}{p^3q^2} = \square$

---

9. Evaluate the expression for the given value of x.

$$-3x^2;\ x = 5$$

The expression evaluates to $\square$.

---

10. Simplify the expression.

$$(6x)^0$$

$(6x)^0 = \square$

---

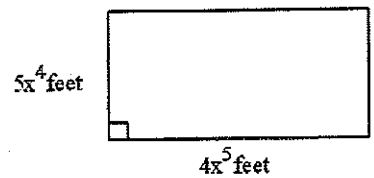
11. Evaluate the expression.

$$8 \cdot (-5)^2$$

$8 \cdot (-5)^2 = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents Quiz

12. Find the area of the rectangle.



The area of the rectangle is ☐ square feet. (Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Rules of Exponents Quiz

1. -6

2. $4x^7$

3. z^7

4. -1

5. $\frac{1}{27}$

6. x^{10}

7. -1

8. p^2q^4

9. -75

10. 1

11. 200

12. $20x^9$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

1. Perform the indicated operation.

   Subtract $(-8x^2-3x)$ from $(-3x^2-9x)$.

   The difference between the two polynomials is $\square$.

---

2. Classify the polynomial as a monomial, binomial, trinomial, or none of these. Also, give the degree.

   $x^2-14x+49$

   Choose the correct type of polynomial.

   ○ Monomial　　○ Binomial

   ○ Trinomial　　○ None of these

   What is the degree of the polynomial?

   The degree is $\square$.

---

3. Perform the indicated operation.

   $(2x^3+8x-10)+(12x^3+3x-2x)$

   $(2x^3+8x-10)+(12x^3+3x-2x)=\square$

---

4. The height of an object in feet at time t seconds is given by the polynomial function $P(t)=4t^2+1385$.

   Find the height of the object at $t=1$ second.

   When $t=1$ second, the height of the object is $\square$ feet.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

5. Add the following polynomials.

$$\begin{array}{r} -5x^2+6x+1 \\ +\quad 2x^2-4x-9 \\ \hline \end{array}$$

The sum is $\square$. (Simplify your answer.)

6. Find the degree of the given term.

36

The degree is $\square$.

7. Simplify by combining like terms.

$y+14y$

$y+14y=\square$

8. Perform the indicated operation.

$(3x^3+8x^2-2x+1)-(-12x^3+12x^2-12x-6)$

$(3x^3+8x^2-2x+1)-(-12x^3+12x^2-12x-6)=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

9. Classify the polynomial as a monomial, binomial, trinomial, or none of these. Also, give the degree.

$$42$$

Choose the correct type of polynomial.

○ Binomial

○ Trinomial

○ Monomial

○ None of these

What is the degree of 42?

The degree is $\square$.

---

10. Find the degree of the given term.

$$mn^5$$

The degree is $\square$.

---

11. Perform the indicated operation.

$$(8x^2y - 2) - (-12x^2y + 10y)$$

$(8x^2y - 2) - (-12x^2y + 10y) = \square$

---

12. Simplify by combining like terms.

$$xy^2 + 9x - x - 2xy^2$$

$xy^2 + 9x - x - 2xy^2 = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

13. Identify whether the polynomial is a monomial, binomial, trinomial, or none of these. Then, determine the degree of the polynomial.

$$5p^2m - 4p^5m^4$$

Choose the correct type of polynomial.

- ○ Binomial
- ○ Monomial
- ○ Trinomial
- ○ None of these

What is the degree of $5p^2m - 4p^5m^4$?

The degree is $\square$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

14. A projectile is fired upward from the ground with an initial velocity of 257 feet per second. Assume that the height of the projectile at any time t can be described by the polynomial function $P(t) = -16t^2 + 257t$. Find the height of the projectile at each given time.

a. What is the height of the projectile at $t = 3$ seconds?

☐ ft

b. What is the height of the projectile at $t = 5$ seconds?

☐ ft

c. What is the height of the projectile at $t = 8$ seconds?

☐ ft

d. What is the height of the projectile at $t = 13$ seconds?

☐ ft

e. Explain why the height changes as time passes.

○ A. As t increases, a polynomial of degree 2, and a negative coefficient of t^2, decreases, reaches a minimum, and then increases.

○ B. As t increases, a polynomial of degree 2, and a positive coefficient of t^2, increases, reaches a maximum, and then decreases.

○ C. As t increases, a polynomial of degree 2, and a positive coefficient of t^2, decreases, reaches a minimum, and then increases.

○ D. As t increases, a polynomial of degree 2, and a negative coefficient of t^2, increases, reaches a maximum, and then decreases.

○ E. None of the above.

f. Approximate (to the nearest second) how long before the object hits the ground.

☐ sec

(Type a whole number.)

15. The polynomial function $P(x) = 30x - 55{,}000$ models the relationship between the number of computer briefcases x that a company sells and the profit the company makes, P(x). Find P(4000), the profit from selling 4000 computer briefcases.

$P(4000) = \$\square$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

1. $5x^2 - 6x$

2. the third choice
2

3. $14x^3 + 9x - 10$

4. 1389

5. $-3x^2 + 2x - 8$

6. 0

7. $15y$

8. $15x^3 - 4x^2 + 10x + 7$

9. the third choice
0

10. 6

11. $20x^2y - 10y - 2$

12. $-xy^2 + 8x$

13. the first choice
9

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Functions-Add- Subtract Quiz

14. 627
885
1032
637
D
16

15. 65,000

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Multiplying Polynomials Quiz

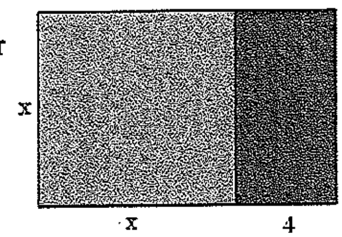
1. Find the following product.

$$8x(x^2+5x-3)$$

$8x(x^2+5x-3)=\square$

---

2. The area of the larger rectangle to the right is $x(x+4)$. Find another expression for this area by finding the sum of the areas of the smaller rectangles.



The area is $\square$.

---

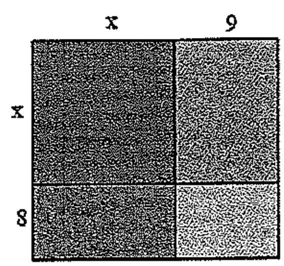
3. Find the following product.

$$(6y-5)^2$$

$(6y-5)^2=\square$

---

4. The area of the figure to the right is $(x+8)(x+9)$. Find another expression for this area by finding the sum of the areas of the smaller rectangles.



The area is $\square$.

---

5. Find the following product.

$$(3x+9)^2$$

$(3x+9)^2=\square$

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Multiplying Polynomials Quiz

6. Find the following product.

$$-5y(y^2-9y-9)$$

$-5y(y^2-9y-9)=\square$

7. Find the following product.

$$(8xy-y)^2$$

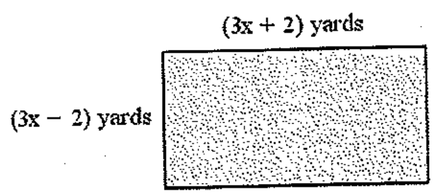
$(8xy-y)^2=\square$

8. Perform the indicated operation.

$$(-4y^3)^3$$

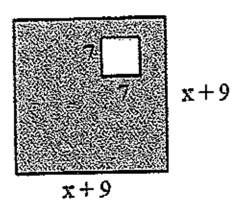
$(-4y^3)^3=\square$

9. Find the area of the rectangle.



The area is $(\square)$ square yards.

10. Write a polynomial that describes the area of the shaded region.



The area is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Multiplying Polynomials Quiz

1. $8x^3+40x^2-24x$

2. x^2+4x

3. $36y^2-60y+25$

4. $x^2+17x+72$

5. $9x^2+54x+81$

6. $-5y^3+45y^2+45y$

7. $64x^2y^2-16xy^2+y^2$

8. $-64y^9$

9. $9x^2-4$

10. $x^2+18x+32$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products Quiz

1. Find the product using the FOIL method.

$$(4x+5)(5x-4)$$

$(4x+5)(5x-4)=\square$

---

2. Find the product using the FOIL method.

$$(x-8)(x+7)$$

$(x-8)(x+7)=\square$

---

3. Find the product.

$$2(x-2)^2$$

$2(x-2)^2=\square$

---

4. Simplify.

$$\frac{18a^{18}b^8}{-6a^{13}b^4}$$

$\frac{18a^{18}b^8}{-6a^{13}b^4}=\square$

---

5. Find the product.

$$(9x-9)(9x+9)$$

$(9x-9)(9x+9)=\square$

---

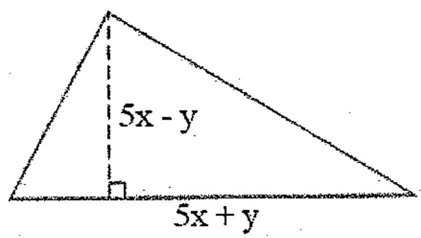
6. Find the product.

$$(7x-6z)(7x+6z)$$

$(7x-6z)(7x+6z)=\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products Quiz

7. Find the area of the triangle.



The area is $\square$.
(Simplify your answer. Use integers or fractions for any numbers in the expression.)

---

8. Find the product using the FOIL method.

$$(5d+6)(7d-10)$$

$(5d+6)(7d-10) = \square$

---

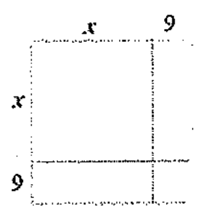
9. Find the product.

$$(6x+7)^2$$

$(6x+7)^2 = \square$

---

10. Find the area of the outer square.



The area is $\square$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Polynomial Special Products Quiz

1. $20x^2 + 9x - 20$

2. $x^2 - x - 56$

3. $2x^2 - 8x + 8$

4. $-3a^5b^4$

5. $81x^2 - 81$

6. $49x^2 - 36z^2$

7. $\dfrac{25x^2}{2} - \dfrac{y^2}{2}$

8. $35d^2 - 8d - 60$

9. $36x^2 + 84x + 49$

10. $x^2 + 18x + 81$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

1. Evaluate the following expression using exponential rules. Write the result in standard notation.

$$(7.3 \times 10^{-7})(2 \times 10^{-2})$$

$(7.3 \times 10^{-7})(2 \times 10^{-2}) = \square$

2. Simplify the following expression. Write the result in standard notation.

$$(4.86 \times 10^{7})(2.4 \times 10^{-7})$$

$(4.86 \times 10^{7})(2.4 \times 10^{-7}) = \square$

3. Write the following number in scientific notation.

974,000

$974{,}000 = \square$

(Use the multiplication symbol in the math palette as needed.)

4. Simplify the following expression using positive exponents only.

$$\frac{r}{r^{-3}r^{-8}}$$

$\frac{r}{r^{-3}r^{-8}} = \square$

5. Simplify the following expression using positive exponents only.

$$\frac{5ab^{-9}}{5^{-2}a^{-5}b^{-8}}$$

$\frac{5ab^{-9}}{5^{-2}a^{-5}b^{-8}} = \square$

6. Write the following number in standard notation.

$$7.242 \times 10^{-10}$$

$7.242 \times 10^{-10} = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

7. Simplify the following expression.

$$8^{-1}+7^{-1}$$

$8^{-1}+7^{-1}=\square$ (Type a simplified fraction.)

8. Write the following number in standard notation.

$$4.302\times 10^{7}$$

$4.302\times 10^{7}=\square$

9. Simplify the following expression using positive exponents only.

$$\frac{1}{p^{-1}}$$

$\frac{1}{p^{-1}}=\square$

10. Simplify the following expression using positive exponents only.

$$\frac{-16a^{4}b}{8ab^{5}}$$

$\frac{-16a^{4}b}{8ab^{5}}=\square$ (Simplify your answer.)

11. Simplify the following expression using positive exponents only.

$$\frac{(-8xy^{-1})^{-2}}{(xy^{-3})^{-6}}$$

$\frac{(-8xy^{-1})^{-2}}{(xy^{-3})^{-6}}=\square$ (Type answer as a single fraction.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

12. Simplify the following expression. Assume the variables represent positive integers.

$$\frac{y^{5a}}{y^{-a}}$$

$$\frac{y^{5a}}{y^{-a}} = \square$$

13. Simplify the following expression using positive exponents only.

$$(-7x^3y^{-5})(9x^{-6}y^6)$$

$$(-7x^3y^{-5})(9x^{-6}y^6) = \square$$

14. Simplify the following expression. Assume the variables represent positive integers.

$$\frac{y^{2a}}{y^{-a}}$$

$$\frac{y^{2a}}{y^{-a}} = \square$$

15. Write the following number in scientific notation.

0.00123

$0.00123 = \square$

(Use the multiplication symbol in the math palette as needed.)

16. Evaluate the following expression using exponential rules. Write the result in standard notation.

$$\frac{1.2 \times 10^{-1}}{3 \times 10^{-5}}$$

$$\frac{1.2 \times 10^{-1}}{3 \times 10^{-5}} = \square$$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

17. Simplify the following expression using positive exponents only.

$$\frac{(a^7)^4}{(a^9)^8}$$

$\frac{(a^7)^4}{(a^9)^8} = \square$

18. Simplify the following expression using positive exponents only.

$$(x^9y^7)^{-4}$$

$(x^9y^7)^{-4} = \square$

19. Simplify the following expression using positive exponents only.

$$\frac{p^{-5}}{q^{-6}}$$

$\frac{p^{-5}}{q^{-6}} = \square$ (Simplify your answer.)

20. Simplify the following expression. Assume the variables represent positive integers.

$$\frac{y^{8a}}{y^{-a}}$$

$\frac{y^{8a}}{y^{-a}} = \square$

Student: __________ **Date:** __________ **Time:** __________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

1. 0.0000000146

2. 11.664

3. 9.74×10^5

4. r^{12}

5. $\frac{125a^6}{b}$

6. 0.0000000007242

7. $\frac{15}{56}$

8. 43,020,000

9. p

10. $-\frac{2a^3}{b^4}$

11. $\frac{x^4}{64y^{16}}$

12. y^{6a}

13. $-\frac{63y}{x^3}$

14. y^{3a}

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Negative Exponents and Scientific Notation Quiz

15. 1.23×10^{-3}

16. 4,000

17. $\dfrac{1}{a^{44}}$

18. $\dfrac{1}{x^{36}y^{28}}$

19. $\dfrac{q^{6}}{p^{5}}$

20. y^{9a}

Student: ______	Instructor: Darlene Ford	Assignment: Division of Polynomials Quiz
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Divide.

$$\frac{3x^2-10x+1}{x-4}$$

$$\frac{3x^2-10x+1}{x-4}=\square$$

2. Divide.

$$\frac{4x^2-64}{2x-8}$$

$$\frac{4x^2-64}{2x-8}=\square$$

3. Divide.

$$\frac{6p^6+3p^5}{3p}$$

$$\frac{6p^6+3p^5}{3p}=\square$$

4. Divide.

$$\frac{20x^2+22x-12}{5x-2}$$

$$\frac{20x^2+22x-12}{5x-2}=\square$$

5. Divide.

$$\frac{5x^2+46x+9}{x+9}$$

$$\frac{5x^2+46x+9}{x+9}=\square$$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Division of Polynomials Quiz

6. Divide.

$$\frac{x^2+8x+15}{x+3}$$

$$\frac{x^2+8x+15}{x+3}=\square$$

7. Divide.

$$\frac{4x^2+6x-1}{x+1}$$

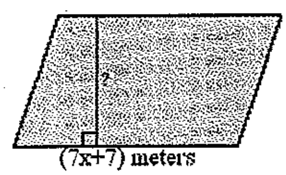
$$\frac{4x^2+6x-1}{x+1}=\square$$

8. Divide.

$$\frac{8x^7-2x^3+16}{-2x}$$

$$\frac{8x^7-2x^3+16}{-2x}=\square$$

9. The area of the parallelogram pictured to the right is $35x^2+70x+35$ square meters. If its base is $(7x+7)$ meters, find its height.



The height is $\square$ meters.

10. Divide.

$$\frac{x^3-729}{x-9}$$

$$\frac{x^3-729}{x-9}=\square$$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Division of Polynomials Quiz

1. $3x+2+\frac{9}{x-4}$

2. $2x+8$

3. $2p^5+p^4$

4. $4x+6$

5. $5x+1$

6. $x+5$

7. $4x+2-\frac{3}{x+1}$

8. $-4x^6+x^2-\frac{8}{x}$

9. $5x+5$

10. $x^2+9x+81$

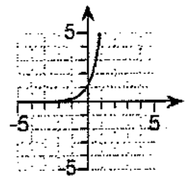
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions

1. Graph the equation on paper, and then choose the correct graph.

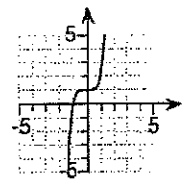
$y = 5^x$

Choose the correct graph on the right.

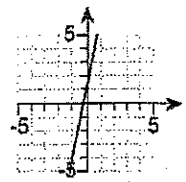
○A.



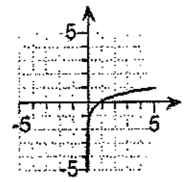
○B.



○C.



○D.

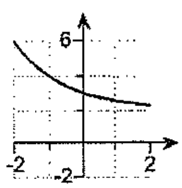


2. Graph the exponential function.

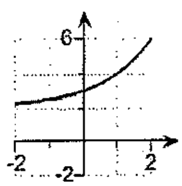
$y = 2^x + 2$

Identify the graph of the function $y = 2^x + 2$

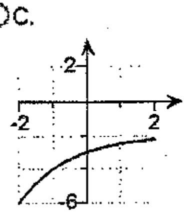
○A.



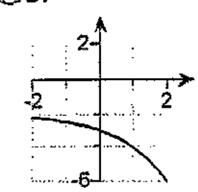
○B.



○C.



○D.

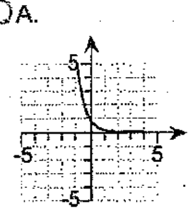


3. Graph the equation on paper, and then choose the correct graph.

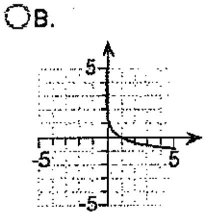
$y = \left(\frac{1}{6}\right)^x$

Choose the correct graph.

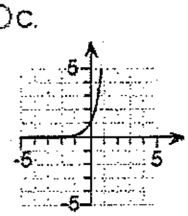
○A.



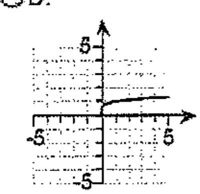
○B.



○C.



○D.



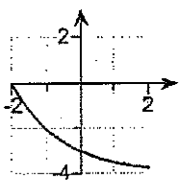
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions

4. Graph the exponential function.

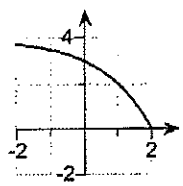
$$y=\left(\frac{1}{2}\right)^{x}-4$$

Identify the graph of the function $y=\left(\frac{1}{2}\right)^{x}-4$

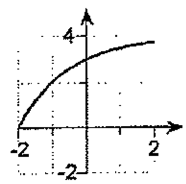
○A.



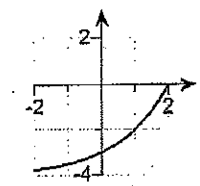
○B.



○C.



○D.

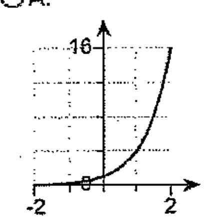


5. Graph the exponential function.

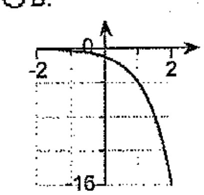
$$y=-4^{x}$$

Identify the graph of the function $y=-4^{x}$

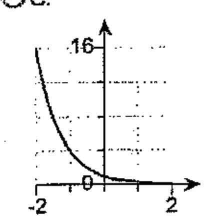
○A.



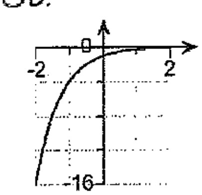
○B.



○C.



○D.

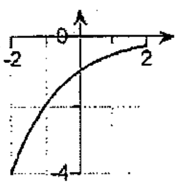


6. Graph the exponential function.

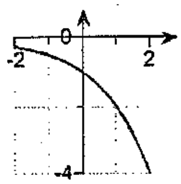
$$y = -\left(\frac{1}{2}\right)^x$$

Identify the graph of the function $y = -\left(\frac{1}{2}\right)^x$

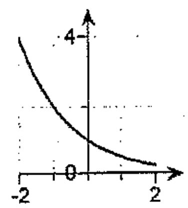
○ A.



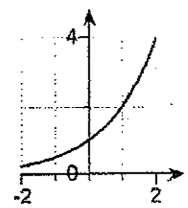
○ B.



○ C.



○ D.

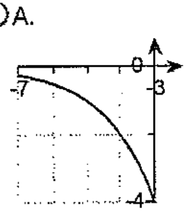


7. Graph the exponential function.

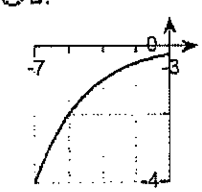
$$y = 2^{(x+5)}$$

Identify the graph of the function $y = 2^{(x+5)}$

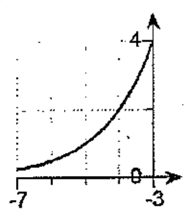
○ A.



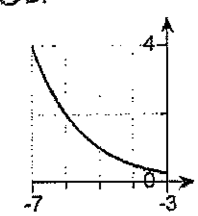
○ B.



○ C.



○ D.



8. Solve the equation for x.

$$3^x = 81$$

$x = \square$

9. Solve for x.

$$9^x = 27$$

The solution is $x = \square$.
(Simplify your answer.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions

1. A

2. B

3. A

4. A

5. B

6. A

7. C

8. 4

9. $\frac{3}{2}$

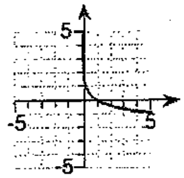
Student: ________ **Date:** ________ **Time:** ________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions Quiz

1. Graph the equation on paper, and then choose the correct graph.

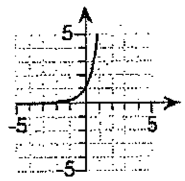
$$y = \left(\frac{1}{5}\right)^x$$

Choose the correct graph.

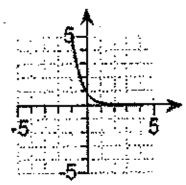
○A.



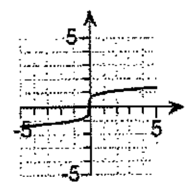
○B.



○C.



○D.

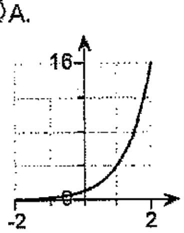


2. Graph the exponential function.

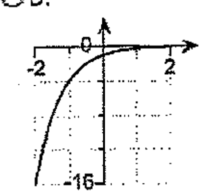
$$y = -4^x$$

Identify the graph of the function $y = -4^x$

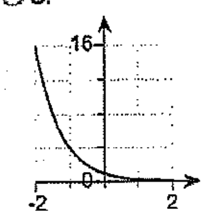
○A.



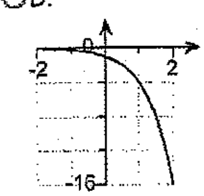
○B.



○C.



○D.



3. Solve the equation for x.

$$2^x = 4$$

x = $\square$

Student: ______________
Date: ______________
Time: ______________

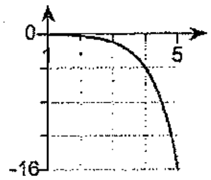
Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

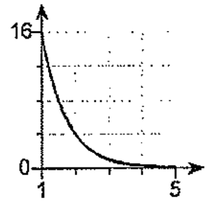
Assignment: Exponential Growth Functions Quiz

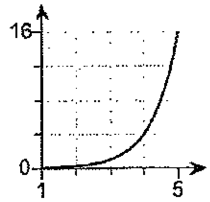
4. Graph the exponential function.

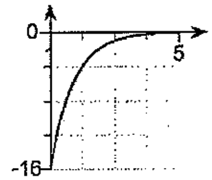
$y = 4^{(x-3)}$

Identify the graph of the function $y = 4^{(x-3)}$

○A.


○B.


○C.


○D.


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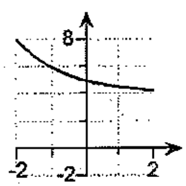
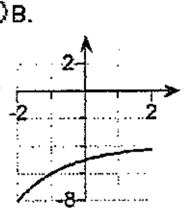
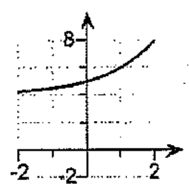
5. Graph the exponential function.

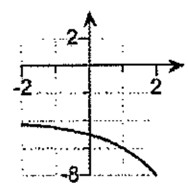
$y = 2^x + 4$

Identify the graph of the function $y = 2^x + 4$

○A.


○B.


○C.


○D.


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6. Solve for x.

$81^x = 243$

The solution is $x = \square$.
(Simplify your answer.)

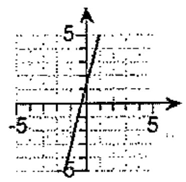
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions Quiz

7. Graph the equation on paper, and then choose the correct graph.

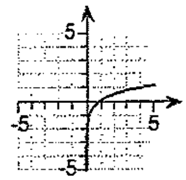
$y = 4^x$

Choose the correct graph on the right.

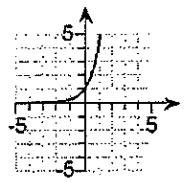
A.



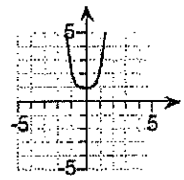
B.



C.



D.



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8. One type of uranium has a daily radioactive decay rate of 0.4%. If 30 pounds of this uranium is available today, find how much will still remain after 20 days.
Use $y = 30(2.7)^{-0.004t}$ and let t be 20 days.

The quantity left after 20 days is $\square$ pounds.
(Round to the nearest tenth as needed.)

---

9. How much money will there be in an account at the end of 10 years if $14000 is deposited at 7%. The interest is compounded semi − annually.
(Assume no withdrawals are made.)

The amount after 10 years will be $ $\square$. (Simplify your answer. Round to the nearest cent.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Exponential Growth Functions Quiz

1. C

2. D

3. 2

4. C

5. C

6. $\frac{5}{4}$

7. C

8. 27.7

9. 27857.04

Student: ________ **Date:** ________ **Time:** ________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Greatest Common Factor

1. Find the GCF for the given list.

   16, 40

   The GCF is $\square$.

2. Find the GCF for the given list.

   y^8, y^9, y^5

   The GCF is $\square$.

3. Find the GCF for the given list.

   $x^{10}y^9, x^6y^6, x^9y^6$

   The GCF is $\square$.

4. Find the GCF for the given list.

   16x, 6

   The GCF is $\square$.

5. Find the GCF for the given list.

   $6x^9, 12x^4, 18x^5$

   The GCF is $\square$.

6. Find the GCF for the given list.

   $24x^5y^7, 4x^9y^9, 28x^9y^7$

   The GCF is $\square$.

7. Factor out the GCF from the given polynomial.

   $30x - 10$

   $30x - 10 = \square$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Greatest Common Factor

8. Factor out the GCF from the given polynomial.

$$-9a^8x^4 - 21a^7x^4$$

$-9a^8x^4 - 21a^7x^4 = \square$

9. Factor out the GCF from the given polynomial.

$$9x^3 + 15x^2 + 18x$$

$9x^3 + 15x^2 + 18x = \square$

10. Factor out the GCF from the given polynomial.

$$2x^3y - 18x^2y + 14xy$$

$2x^3y - 18x^2y + 14xy = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Greatest Common Factor

1. 8

2. y^5

3. x^6y^6

4. 2

5. $6x^4$

6. $4x^5y^7$

7. $10(3x - 1)$

8. $-3a^7x^4(3a + 7)$

9. $3x(3x^2 + 5x + 6)$

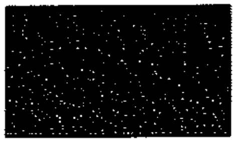
10. $2xy(x^2 - 9x + 7)$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Factoring Polynomials
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Represent the given condition using a single variable, x.

The length and width of a rectangle whose length is 2 centimeters more than its width

x



The width of the rectangle is $\square$.

The length of the rectangle is $\square$.

---

2. Represent the given condition using a single variable, x.

Two consecutive odd integers

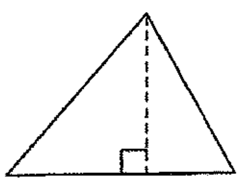
The first odd integer is $\square$.

The next consecutive odd integer is $\square$.

---

3. Represent the given condition using a single variable, x.

The base and height of a triangle whose height is four more than six times its base



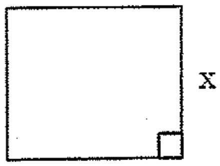
x

The base is $\square$.

The height is $\square$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials

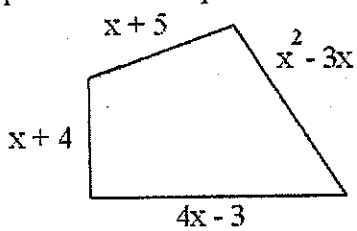
4. The *area* of the square is 196 square units. Find the length of its sides.



$x = \square$ units

---

5. The perimeter of the quadrilateral is 46 centimeters. Find the length of each side.



Side one $= x + 4 = \square$ cm

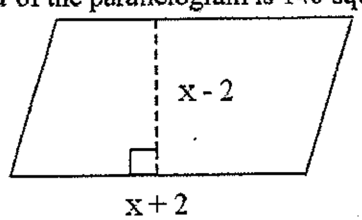
Side two $= x + 5 = \square$ cm

Side three $= x^2 - 3x = \square$ cm

Side four $= 4x - 3 = \square$ cm

---

6. The *area* of the parallelogram is 140 square miles. Find its base and height.



The base is $\square$ miles.

The height is $\square$ miles.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials

7. An object is thrown upward from the top of a 77-foot building with an initial velocity of 66 feet per second. The height h of the object after t seconds is given by the quadratic equation $h = -11t^2 + 66t + 77$. When will the object hit the ground?

The object will hit the ground at when the time is $\square$ seconds.

---

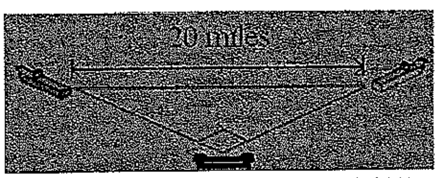
8. The length of a rectangle is 11 centimeters less than four times its width. Its area is 20 square centimeters. Find the dimensions of the rectangle.

The width is $\square$ cm.

The length is $\square$ cm.

---

9. Two boats travel at a right angle to each other after leaving the same dock at the same time. One hour later the boats are 20 miles apart. If one boat travels 4 miles per hour slower than the other boat, find the rate of each boat.



The speed of the slower boat is $\square$ mph.

The speed of the faster boat is $\square$ mph.

---

10. The sum of two integers is 13 and the sum of their squares is 89. Find the integers.

The integers are $\square$. (Use a comma to separate answers as needed.)

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Factoring Polynomials
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. x
   x + 2

2. x
   x + 2

3. x
   6x + 4

4. 14

5. 9
   10
   10
   17

6. 14
   10

7. 7

8. 4
   5

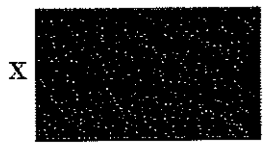
9. 12
   16

10. 5, 8

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials

1. Represent the given condition using a single variable, x.

The length and width of a rectangle whose length is 6 centimeters more than its width



The width of the rectangle is $\square$.

The length of the rectangle is $\square$.

---

2. Represent the given condition using a single variable, x.

Two consecutive even integers

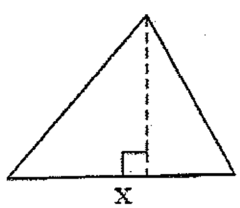
The first even integer is $\square$.

The next consecutive even integer is $\square$.

---

3. Represent the given condition using a single variable, x.

The base and height of a triangle whose height is nine more than four times its base

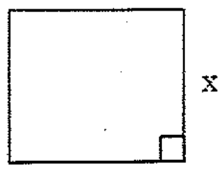


The base is $\square$.

The height is $\square$.

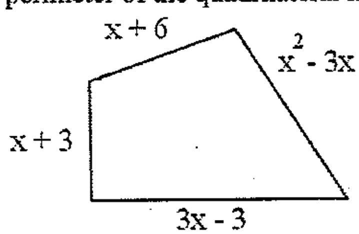
Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials

4. The *area* of the square is 81 square units. Find the length of its sides.



x = ☐ units

5. The perimeter of the quadrilateral is 41 centimeters. Find the length of each side.



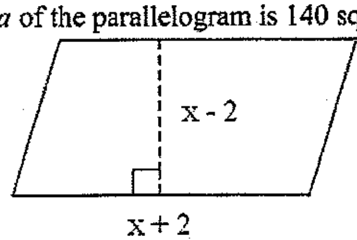
Side one = $x + 3 =$ ☐ cm

Side two = $x + 6 =$ ☐ cm

Side three = $x^2 - 3x =$ ☐ cm

Side four = $3x - 3 =$ ☐ cm

6. The *area* of the parallelogram is 140 square miles. Find its base and height.



The base is ☐ miles.

The height is ☐ miles.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials

7. An object is thrown upward from the top of a 104-foot building with an initial velocity of 91 feet per second. The height h of the object after t seconds is given by the quadratic equation $h = -13t^2 + 91t + 104$. When will the object hit the ground?

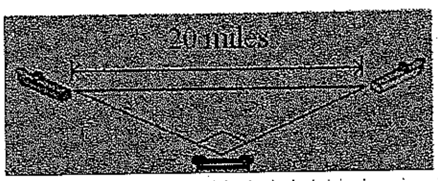
The object will hit the ground at when the time is ☐ seconds.

8. The length of a rectangle is 7 centimeters less than four times its width. Its area is 15 square centimeters. Find the dimensions of the rectangle.

The width is ☐ cm.

The length is ☐ cm.

9. Two boats travel at a right angle to each other after leaving the same dock at the same time. One hour later the boats are 20 miles apart. If one boat travels 4 miles per hour slower than the other boat, find the rate of each boat.



The speed of the slower boat is ☐ mph.

The speed of the faster boat is ☐ mph.

10. The sum of two integers is 10 and the sum of their squares is 58. Find the integers.

The integers are ☐. (Use a comma to separate answers as needed.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e
Assignment: Factoring Polynomials	

1. x
   $x+6$

2. x
   $x+2$

3. x
   $4x+9$

4. 9

5. 8
   11
   10
   12

6. 14
   10

7. 8

8. 3
   5

9. 12
   16

10. 7, 3

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Greatest Common Factor Quiz

1. Factor out the GCF from the given polynomial.

   $14x^3 - 10x^2 - 18x$

   $14x^3 - 10x^2 - 18x = \square$

2. Factor out the GCF from the given polynomial.

   $2x^3y - 14x^2y + 10xy$

   $2x^3y - 14x^2y + 10xy = \square$

3. Find the GCF for the given list.

   $27x, 6$

   The GCF is $\square$.

4. Find the GCF for the given list.

   $21x^4y, 7x^5y^6, 42x^5y$

   The GCF is $\square$.

5. Find the GCF for the given list.

   x^8y^6, x^6y^5, x^4y^5

   The GCF is $\square$.

6. Find the GCF for the given list.

   y^4, y^9, y^6

   The GCF is $\square$.

7. Find the GCF for the given list.

   $16, 44$

   The GCF is $\square$.

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Greatest Common Factor Quiz

8. Factor out the GCF from the given polynomial.

$18x + 6$

$18x + 6 = \square$

---

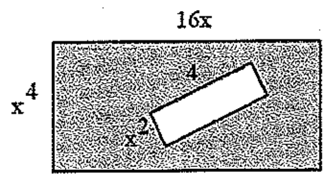
9. Find the GCF for the given list.

$12x^8, 6x^4, 2x^9$

The GCF is $\square$.

---

10. Write an expression for the area of the shaded region. Then write the expression as a factored polynomial.



The expression for the area of the shaded region is $A = \square$.
(Do not factor yet.)

The expression as a factored polynomial is $A = \square$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Greatest Common Factor Quiz

1. $2x(7x^2 - 5x - 9)$

2. $2xy(x^2 - 7x + 5)$

3. 3

4. $7x^4y$

5. x^4y^5

6. y^4

7. 4

8. $6(3x + 1)$

9. $2x^4$

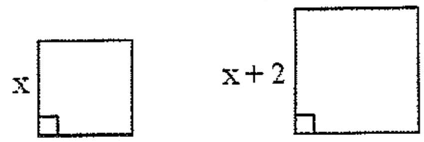
10. $16x^5 - 4x^2$
    $4x^2(4x^3 - 1)$

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Factoring Polynomials Quiz

1. If the sides of a square are increased by 2 inches, the area becomes 64 square inches. Find the length of the sides of the original square.



The length is $\square$ inches.

2. Represent the given condition using a single variable, x.

Two consecutive odd integers

The first odd integer is $\square$.

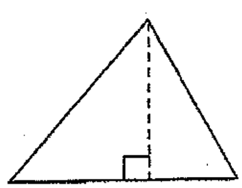
The next consecutive odd integer is $\square$.

3. An object is thrown upward from the top of a 104-foot building with an initial velocity of 91 feet per second. The height h of the object after t seconds is given by the quadratic equation $h = -13t^2 + 91t + 104$. When will the object hit the ground?

The object will hit the ground at when the time is $\square$ seconds.

4. Represent the given condition using a single variable, x.

The base and height of a triangle whose height is seven more than seven times its base



The base is $\square$.

The height is $\square$.

Student: ____________________
Date: ____________________
Time: ____________________

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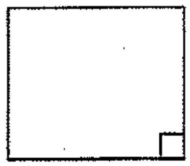
Assignment: Factoring Polynomials Quiz

5. The *area* of the square is 169 square units. Find the length of its sides.


x

$x =$ ☐ units

---

6. Represent the given condition using a single variable, x.

The length and width of a rectangle whose length is 5 centimeters more than its width

x


The width of the rectangle is ☐.

The length of the rectangle is ☐.

---

7. The length of a rectangle is 23 centimeters less than six times its width. Its area is 35 square centimeters. Find the dimensions of the rectangle.

The width is ☐ cm.

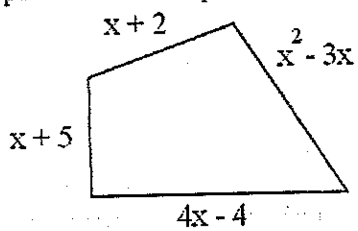
The length is ☐ cm.

Student: ____________
Date: ____________
Time: ____________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Factoring Polynomials Quiz

8. The perimeter of the quadrilateral is 43 centimeters. Find the length of each side.



Side one $= x + 5 = \square$ cm

Side two $= x + 2 = \square$ cm

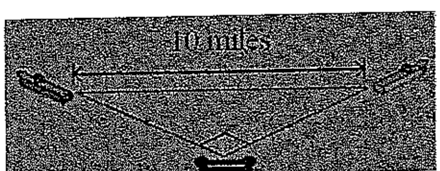
Side three $= x^2 - 3x = \square$ cm

Side four $= 4x - 4 = \square$ cm

9. The sum of two integers is 14 and the sum of their squares is 106. Find the integers.

The integers are $\square$. (Use a comma to separate answers as needed.)

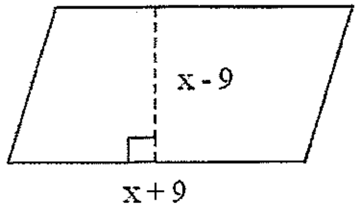
10. Two boats travel at a right angle to each other after leaving the same dock at the same time. One hour later the boats are 10 miles apart. If one boat travels 2 miles per hour faster than the other boat, find the rate of each boat.



The speed of the faster boat is $\square$ mph.

The speed of the slower boat is $\square$ mph.

11. The *area* of the parallelogram is 115 square miles. Find its base and height.



The base is ☐ miles.

The height is ☐ miles.

12. One leg of a right triangle is 6 millimeters longer than the shorter leg and the hypotenuse is 12 millimeters longer than the shorter leg. Find the lengths of the sides of the triangle.

The length of the shorter leg is ☐ millimeters.

The length of the longer leg is ☐ millimeters.

The length of the hypotenuse is ☐ millimeters.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Factoring Polynomials Quiz

1. 6

2. x
x + 2

3. 8

4. x
7x + 7

5. 13

6. x
x + 5

7. 5
7

8. 10
7
10
16

9. 5, 9

10. 8
6

11. 23
5

12. 18
24
30

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

1. Find each function value.

$$f(x) = \frac{x-5}{7x+2};\ f(-5),\ f(1),\ f(3)$$

a. $f(-5) = \square$ (Simplify your answer. Type an integer or a fraction.)

b. $f(1) = \square$ (Simplify your answer. Type an integer or a fraction.)

c. $f(3) = \square$ (Simplify your answer. Type an integer or a fraction.)

---

2. Find all numbers that are not in the domain of the function.

$$f(z) = \frac{z-3}{5}$$

What numbers are not in the domain?

- ○ -3
- ○ 5
- ○ 3
- ○ All real numbers are in the domain.

---

3. Find the domain of the rational function.

$$s(t) = \frac{t^2-7}{4t}$$

The domain is $\{t \mid t \text{ is a real number and } t \neq \square\}$.
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed.)

---

4. Simplify the expression.

$$\frac{5x^2}{15x^3}$$

$$\frac{5x^2}{15x^3} = \square$$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

5. Simplify the expression.

$$\frac{35x^5y^2}{7x^4y^6}$$

$$\frac{35x^5y^2}{7x^4y^6} = \square$$

6. Multiply. Simplify if possible.

$$\frac{35x}{7} \cdot \frac{x^6}{5x^3}$$

$$\frac{35x}{7} \cdot \frac{x^6}{5x^3} = \square$$

7. Multiply. Simplify if possible.

$$\frac{2x+2}{5} \cdot \frac{10}{16x+16}$$

$$\frac{2x+2}{5} \cdot \frac{10}{16x+16} = \square$$

8. Multiply. Simplify if possible.

$$\frac{x^2-36}{x^2-2x-24} \cdot \frac{x+4}{x}$$

$$\frac{x^2-36}{x^2-2x-24} \cdot \frac{x+4}{x} = \square$$

9. Divide. Simplify if possible.

$$\frac{18x^9}{y^6} \div \frac{3x^9y^6}{5}$$

$$\frac{18x^9}{y^6} \div \frac{3x^9y^6}{5} = \square$$

Student: ______	Instructor: Darlene Ford	Assignment: Simplifying Rational Expressions
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. Multiply. Simplify if possible.

$$\frac{x^2+4x}{9}\cdot\frac{10}{5x+20}$$

$$\frac{x^2+4x}{9}\cdot\frac{10}{5x+20}=\square$$

11. Convert as indicated.

106 square yards = ______ square feet

$\square$ square feet (Type an integer or a decimal.)

12. Convert as indicated.

20 miles per hour = _____ feet per second

$\square$ feet per second (Round to the nearest whole number.)

13. Add the rational expressions.

$$\frac{2}{y+2}+\frac{y}{y+2}$$

$$\frac{2}{y+2}+\frac{y}{y+2}=\square \text{ (Simplify your answer.)}$$

14. Add the rational expressions.

$$\frac{5m}{3n}+\frac{4m}{3n}$$

$$\frac{5m}{3n}+\frac{4m}{3n}=\square \text{ (Simplify your answer.)}$$

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

15. Subtract the rational expressions.

$$\frac{9x+5}{6x+2}-\frac{3x+3}{6x+2}$$

$$\frac{9x+5}{6x+2}-\frac{3x+3}{6x+2}=\square$$ (Simplify your answer.)

---

16. Add the rational expressions.

$$\frac{3x}{x+6}+\frac{18}{x+6}$$

$$\frac{3x}{x+6}+\frac{18}{x+6}=\square$$ (Simplify your answer.)

---

17. Find the LCD for the list of rational expressions.

$$\frac{18}{5x^5}, \frac{7}{10x^3}$$

The LCD is $\square$.

---

18. Rewrite the rational expression as an equivalent rational expression whose denominator is the given polynomial.

$$\frac{9}{x-6}=\frac{}{9(x-6)}$$

$$\frac{9}{x-6}=\frac{\square}{9(x-6)}$$

---

19. Perform the indicated operation.

$$\frac{5}{m}-6$$

$$\frac{5}{m}-6=\square$$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

20. Perform the indicated operation.

$$\frac{x}{x^2-16}-\frac{3}{x^2-8x+16}$$

$$\frac{x}{x^2-16}-\frac{3}{x^2-8x+16}=\square$$

Student: __________ **Date:** __________ **Time:** __________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

1. $\frac{10}{33}$

   $-\frac{4}{9}$

   $-\frac{2}{23}$

2. the fourth choice

3. 0

4. $\frac{1}{3x}$

5. $\frac{5x}{y^4}$

6. x^4

7. $\frac{1}{4}$

8. $\frac{x+6}{x}$

9. $\frac{30}{y^{12}}$

10. $\frac{2x}{9}$

11. 954

12. 29

13. 1

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions

14. $\frac{3m}{n}$

15. 1

16. 3

17. $10x^5$

18. 81

19. $\frac{5-6m}{m}$

20. $\frac{x^2-7x-12}{(x-4)^2(x+4)}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Equations using Rational Expressions

1. Solve the equation.

$$\frac{x}{20}+\frac{9x}{16}=\frac{x}{8}$$

$x = \square$ (Use a comma to separate answers as needed. Type N if there is no solution.)

2. Solve the equation.

$$6+\frac{5}{x}=x+2$$

$x = \square$ (Use a comma to separate answers as needed. Type N if there is no solution.)

3. Solve the equation and check your answer.

$$\frac{k}{2}-\frac{k-8}{4}=\frac{9}{4}$$

$k = \square$
(Simplify your answer. Type N if there is no solution.)

4. Solve the equation.

$$\frac{2}{y}+\frac{3}{7}=\frac{2}{7y}$$

$y = \square$ (Use a comma to separate answers if needed. Type N if there is no solution.)

5. Solve the equation for B.

$$\frac{A}{BH}=\frac{1}{2}$$

$B = \square$

6. Solve $\frac{1}{Y}=\frac{1}{t}+\frac{1}{n}$ for Y.

$Y = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Equations using Rational Expressions

1. 0

2. $-1, 5$

3. 1

4. -4

5. $\dfrac{2A}{H}$

6. $\dfrac{nt}{n+t}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Proportions/ Problem Solving with Rational Numbers

1. Solve the proportion.

$$\frac{x}{8}=\frac{3}{2}$$

$x = \square$

2. Solve the proportion.

$$\frac{x+7}{x+4}=\frac{6}{7}$$

$x = \square$

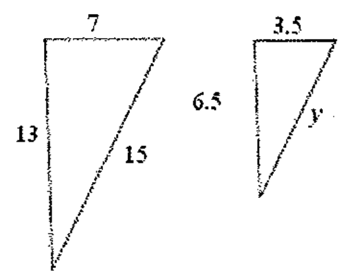
3. The ratio of the weight of an object on Planet A to the weight of the same object on Planet B is 100 to 3. If an elephant weighs 3200 pounds on Planet A, find the elephant's weight on Planet B.

The elephant's weight on Planet B is $\square$ lb.

4. There are 110 calories per 28.4 grams of Cereal X. Find how many calories are in 39.76 grams of this cereal.

There are $\square$ calories in 39.76 grams of this cereal.

5. Find the unknown length y in the following pair of similar triangles.



$y = \square$

6. Four times the reciprocal of a number equals 2 times the reciprocal of 2. Find the number.

The number is $\square$.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Proportions/ Problem Solving with Rational Numbers

7. Eight divided by the sum of x and 9 equals the quotient of 5 and the difference of x and 9. Find x.

   x = ☐

---

8. While road testing a new make of car, the editor of a consumer magazine finds that he can go 14 miles into a 2-mile-per-hour wind in the same amount of time he can go 15 miles with a 2-mile-per-hour wind behind him. Find the speed of the car in still air.

   The speed of the car in still air is ☐ mph.

---

9. Ten divided by the difference of a number and 2 minus 9 divided by a number plus 2, equals 3 times the reciprocal of the difference of the number squared and 4. What is the number?

   The number is ☐.

---

10. A paddle boat can move at a speed of 8 km/h in still water. The boat is paddled 14 km downstream in a river in the same time it takes to go 7 km upstream. What is the speed of the river?

    The speed of the river is ☐ km/h .

    (Simplify your answer. Type an integer or a fraction.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Proportions/ Problem Solving with Rational Numbers

1. 12

2. -25

3. 96

4. 154

5. 7.5

6. 4

7. 39

8. 58

9. -35

10. $\frac{8}{3}$

Student: ______	Instructor: Darlene Ford	Assignment: Simplifying Rational Expressions Quiz
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Simplify the expression.

$$\frac{x^2-36}{-6-x}$$

$$\frac{x^2-36}{-6-x}=\square$$

2. Simplify the expression.

$$\frac{10x^6y^8}{5x^2y^7}$$

$$\frac{10x^6y^8}{5x^2y^7}=\square$$

3. Find all numbers that are not in the domain of the function.

$$f(y)=\frac{y-3}{5}$$

What numbers are not in the domain?

- ○ 5
- ○ -3
- ○ 3
- ○ All real numbers are in the domain.

4. Simplify the rational expression.

$$\frac{x^2-8x+7}{x-7}$$

$$\frac{x^2-8x+7}{x-7}=\square$$

5. Reduce the rational expression to lowest terms.

$$\frac{9y-63}{7-y}$$

$$\frac{9y-63}{7-y}=\square$$ (Simplify your answer. Type an integer or a fraction.)

6. Simplify the expression.

$$\frac{6x^7}{3x^9}$$

$$\frac{6x^7}{3x^9} = \square$$

7. Simplify the expression.

$$\frac{x-4}{4-x}$$

$$\frac{x-4}{4-x} = \square$$

8. Simplify the expression.

$$\frac{2x+16}{x^2+8x}$$

$$\frac{2x+16}{x^2+8x} = \square$$

9. Find the domain of the rational function.

$$s(t) = \frac{t^2-9}{5t}$$

The domain is $\{t \mid t \text{ is a real number and } t \neq \square\}$.
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed.)

10. Find all numbers that are not in the domain of the function.

$$f(w) = \frac{w-7}{8}$$

What numbers are not in the domain?

- ○ 8
- ○ 7
- ○ -7
- ○ All real numbers are in the domain.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Rational Expressions Quiz

1. $-x+6$

2. $2x^4y$

3. the fourth choice

4. $x-1$

5. -9

6. $\frac{2}{x^2}$

7. -1

8. $\frac{2}{x}$

9. 0

10. the fourth choice

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Equations using Rational Expressions Quiz

1. Solve the equation.

$$\frac{1}{y}+\frac{1}{4}=\frac{9}{4y}$$

$y=\square$ (Use a comma to separate answers if needed. Type N if there is no solution.)

---

2. Solve the equation for H.

$$\frac{A}{BH}=\frac{1}{2}$$

$H=\square$

---

3. Solve the equation and check your answer.

$$\frac{c}{2}-\frac{c-1}{4}=\frac{5}{4}$$

$c=\square$

(Simplify your answer. Type N if there is no solution.)

---

4. Solve the equation.

$$\frac{x}{4}+\frac{19x}{8}=\frac{x}{10}$$

$x=\square$ (Use a comma to separate answers as needed. Type N if there is no solution.)

---

5. Solve $\frac{1}{Y}=\frac{1}{m}+\frac{1}{t}$ for Y. $Y=\square$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Solving Equations using Rational Expressions Quiz

1. 5

2. $\frac{2A}{B}$

3. 4

4. 0

5. $\frac{tm}{t+m}$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Proportions/ Problem Solving w/ rational #'s Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Solve the proportion.

$$\frac{x}{3} = \frac{4}{1}$$

x = ☐

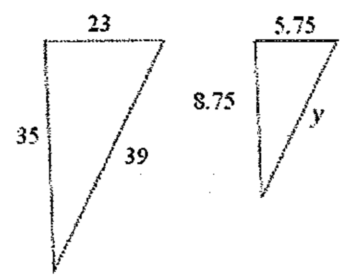
2. The ratio of the weight of an object on Planet A to the weight of the same object on Planet B is 100 to 3. If an elephant weighs 4000 pounds on Planet A, find the elephant's weight on Planet B.

The elephant's weight on Planet B is ☐ lb.

3. There are 110 calories per 28.4 grams of Cereal X. Find how many calories are in 34.08 grams of this cereal.

There are ☐ calories in 34.08 grams of this cereal.

4. Find the unknown length y in the following pair of similar triangles.



y = ☐

5. Four times the reciprocal of a number equals 2 times the reciprocal of 8. Find the number.

The number is ☐.

6. Nine divided by the sum of x and 3 equals the quotient of 8 and the difference of x and 3. Find x.

x = ☐

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Proportions/ Problem Solving w/ rational #s Quiz

7. A semi-truck travels 390 miles through the flatland in the same amount of time that it travels 195 miles through mountains. The rate of the truck is 25 miles per hour slower in the mountains than in the flatland. Find both the flatland rate and mountain rate.

The flatland rate is ☐ mph.

The mountain rate is ☐ mph.

8. While road testing a new make of car, the editor of a consumer magazine finds that he can go 12 miles into a 2-mile-per-hour wind in the same amount of time he can go 13 miles with a 2-mile-per-hour wind behind him. Find the speed of the car in still air.

The speed of the car in still air is ☐ mph.

9. Nine divided by the difference of a number and 1 minus 8 divided by a number plus 1, equals 6 times the reciprocal of the difference of the number squared and 1. What is the number?

The number is ☐.

10. A paddle boat can move at a speed of 20 km/h in still water. The boat is paddled 10 km downstream in a river in the same time it takes to go 5 km upstream. What is the speed of the river?

The speed of the river is ☐ km/h .

(Simplify your answer. Type an integer or a fraction.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Proportions/ Problem Solving w/ rational #'s Quiz

1. 12

2. 120

3. 132

4. 9.75

5. 16

6. 51

7. 50
   25

8. 50

9. -11

10. $\frac{20}{3}$

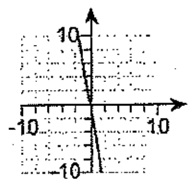
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

1. Graph the linear function.

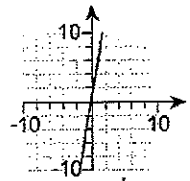
$f(x) = -6x$

Choose the correct graph.

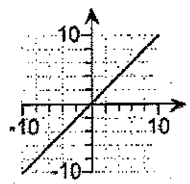
○ A.



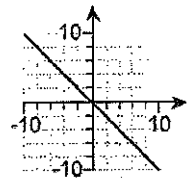
○ B.



○ C.



○ D.

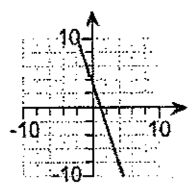


2. Graph the linear function.

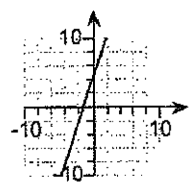
$f(x) = -3x + 4$

Choose the correct graph.

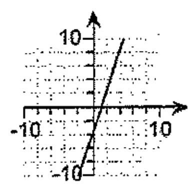
○ A.



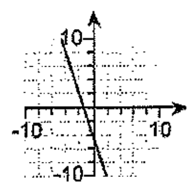
○ B.



○ C.

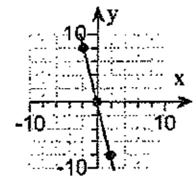


○ D.



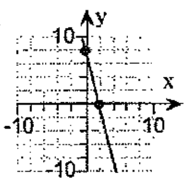
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

3. The graph of $f(x) = -4x$ is shown on the right. Determine the graph of $f(x) = -4x + 8$.

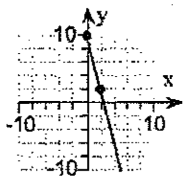


Choose the correct answer below.

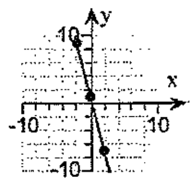
A.



B.



C.



4. Graph the linear function by finding x- and y-intercepts. Then write the equation using function notation.

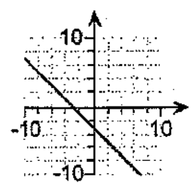
$x - y = 3$

Choose the correct graph.

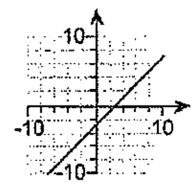
Type the equation using function notation.

$f(x) = \square$

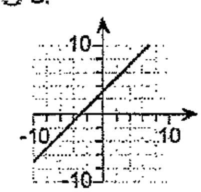
A.



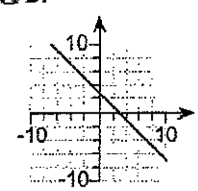
B.



C.



D.



Student: ____________
Date: ____________
Time: ____________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Graphing and Writing Functions (linear/non-linear)

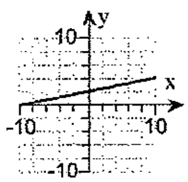
5. Determine the graph of the linear equation $x = 5y$ by finding the x- and y-intercepts. Then write the equation using function notation.

The x-intercept is $\square$.

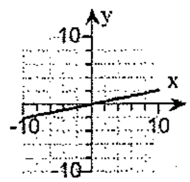
The y-intercept is $\square$.

Choose the correct graph for the equation.

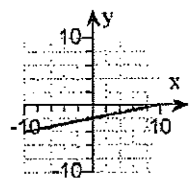
○ A.



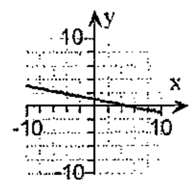
○ B.



○ C.



○ D.



Type the equation using function notation.

$f(x) = \square$

(Use integers or fractions for any numbers in the expression.)

---

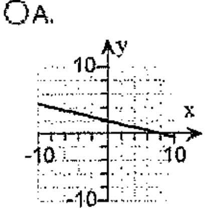
6. Determine the graph of the linear equation $x - 4y = -8$ by finding the x- and y-intercepts. Then write the equation using function notation.

The x-intercept is $\square$.

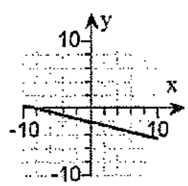
The y-intercept is $\square$.

Choose the correct graph for the equation.

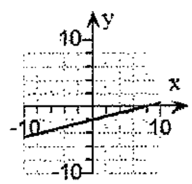
○ A.



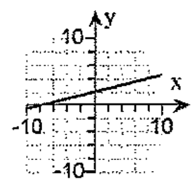
○ B.



○ C.



○ D.



Type the equation using function notation.

$f(x) = \square$

(Use integers or fractions for any numbers in the expression.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

7. Find an equation of the line passing through the given points. Use function notation to write the equation.

   $(1,2)$ and $(3,3)$

   $f(x) = \square$

   (Simplify your answer. Type in the form $f(x) = mx + b$.)

8. Find an equation of the line passing through the given points. Use function notation to write the equation.

   $(-7,-4)$ and $(-3,-2)$

   $f(x) = \square$

   (Simplify your answer. Type in the form $f(x) = mx + b$.)

9. Find an equation of the line. Write the equation using function notation.

   Through $(8,9)$; perpendicular to $8x + y = 9$

   The equation of the line is $f(x) = \square$.

10. Find an equation of the line through $(-3,-4)$ and parallel to $-6x + 5y = -3$. Write the equation using function notation.

   $f(x) = \square$

   (Type the equation using integers or fractions. Simplify your answer.)

11. Complete ordered pairs for the equation, and then graph the equation.

   $x + 5y = 7$

   $(0,\square)$

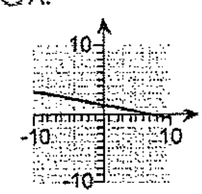
   (Simplify your answer. Type an integer or a fraction.)

   $(\square,0)$

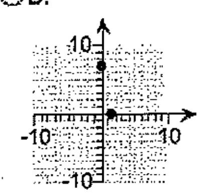
   (Simplify your answer. Type an integer or a fraction.)

   Choose the correct graph of the equation from the choices on the right.

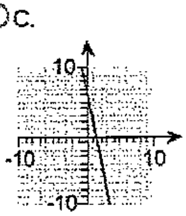
   ○A.



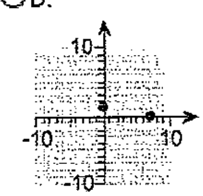
   ○B.



   ○C.



   ○D.



Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Graphing and Writing Functions (linear/non-linear)
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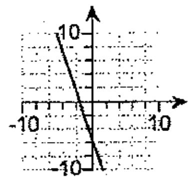
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

12. Graph by plotting points.

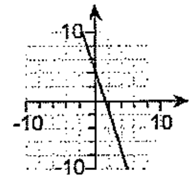
$6x + 2y = 10$

Choose the correct graph.

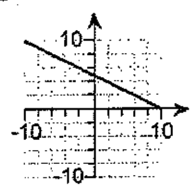
○A.



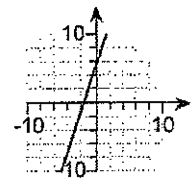
○B.



○C.



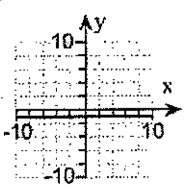
○D.



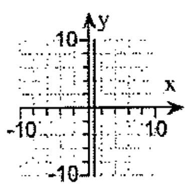
13. Determine the graph of the linear equation $x + 8 = 9$.

Choose the correct answer below.

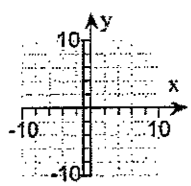
○A.



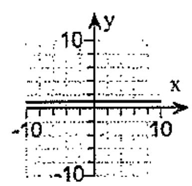
○B.



○C.



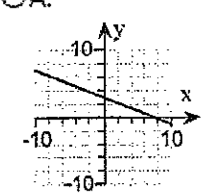
○D.



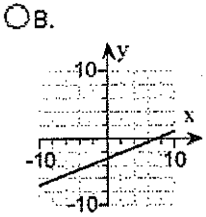
14. Determine the graph of the linear function $f(x) = \frac{2}{5}x + 3$.

Choose the correct answer below.

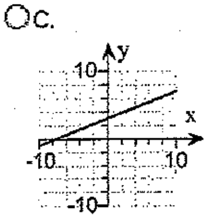
○A.



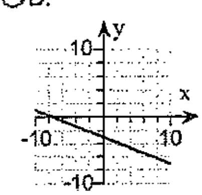
○B.



○C.



○D.



Student: ______________
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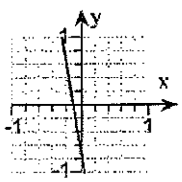
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Graphing and Writing Functions (linear/non-linear)

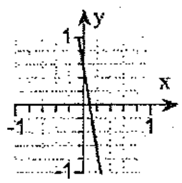
15. Determine the graph of the linear equation $f(x) = -6x - \frac{3}{5}$.

Choose the correct answer below.

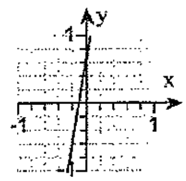
○ A.



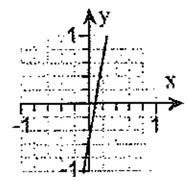
○ B.



○ C.



○ D.



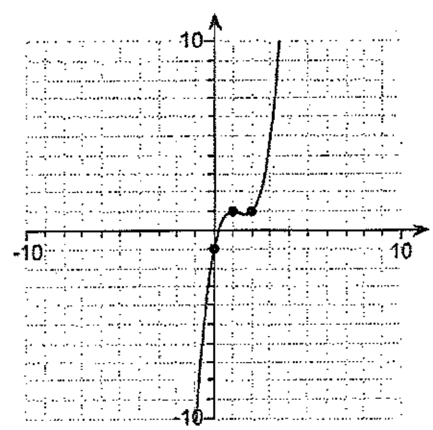
16. Find the equation of the line through $(2,9)$ and $(-4,5)$. Write the equation in standard form.

The equation is $\square$.
(Type the equation using integers. Simplify your answer.)

17. Find the equation of the line through $(10,3)$ and perpendicular to $-5x - 6y = 3$. Write the equation in standard form.

The equation is $\square$.
(Simplify your answer.)

18. Use the graph of the function f to find $f(0)$, $f(1)$, and $f(2)$.



$f(0) = \square$

$f(1) = \square$

$f(2) = \square$

19. Determine whether the following equation is linear and then identify its graph.

$y = 5x^2$

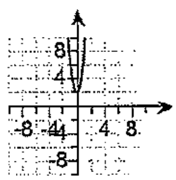
Is $y = 5x^2$ linear?

○ Yes

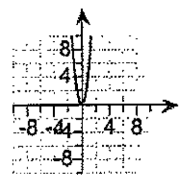
○ No

Identify the graph of $y = 5x^2$.

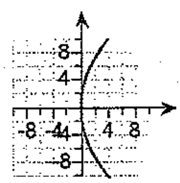
○A.



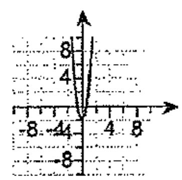
○B.



○C.



○D.



○E. None of the above.

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20. Determine whether the following equation is linear and then identify its graph.

$y = -4x - 3$

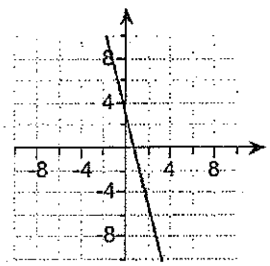
Is $y = -4x - 3$ linear?

○ No

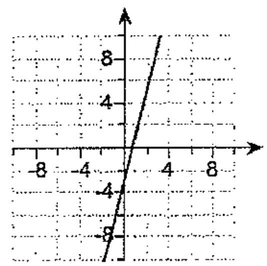
○ Yes

Identify the graph of $y = -4x - 3$.

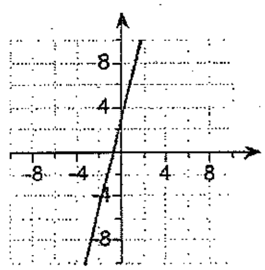
○A.



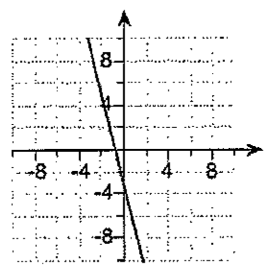
○B.



○C.



○D.



○E. None of the above.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

21. Determine whether the following equation is linear and then identify its graph.

$y = -|-2x|$

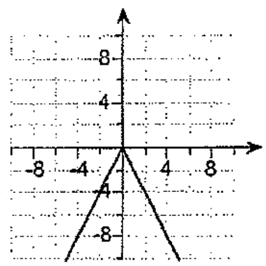
Is $y = -|-2x|$ linear?

○ No

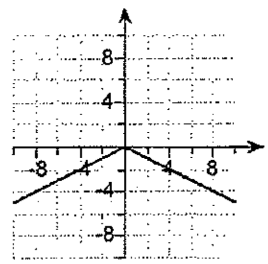
○ Yes

Identify the graph of $y = -|-2x|$.

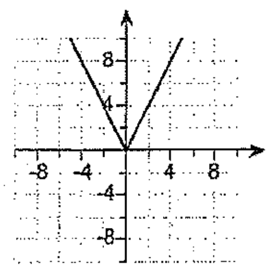
○A.



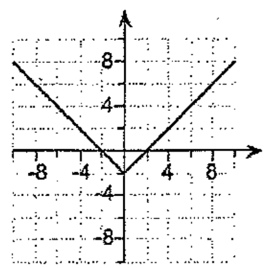
○B.



○C.



○D.



○E. None of the above.

22. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

$y = 3$ when $x = 6$

Find the constant of variation k.

$k = \square$ (Type an integer or a fraction. Simplify your answer.)

Write the direct variation equation.

$y = \square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

23. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

$y = 2$ when $x = \frac{1}{6}$

Find the constant of variation k.

k = ☐ (Type an integer or a fraction. Simplify your answer.)

Write the direct variation equation.

☐

24. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

$y = 0.5$ when $x = 1.1$

Find the constant of variation k.

k = ☐ (Round to one decimal place.)

Write the direct variation equation.

☐

25. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$y = 9$ when $x = 2$

Find the constant of variation k.

k = ☐ (Simplify your answer.)

Write the inverse variation equation.

☐

26. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$$y = \frac{1}{9} \text{ when } x = 18$$

Find the constant of variation k.

$k = \square$ (Simplify your answer.)

Write the inverse variation equation.

$\square$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

1. A

2. A

3. A

4. B
   $x-3$

5. (0,0)
   (0,0)
   B
   $\frac{x}{5}$

6. $(-8,0)$
   (0,2)
   D
   $\frac{1}{4}x+2$

7. $\frac{1}{2}x+\frac{3}{2}$

8. $\frac{1}{2}x-\frac{1}{2}$

9. $\frac{1}{8}x+8$

10. $\frac{6}{5}x-\frac{2}{5}$

11. $\frac{7}{5}$
    7
    A

12. B

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

13. B

14. C

15. A

16. $-2x + 3y = 23$

17. $6x - 5y = 45$

18. -1
1
1

19. the second choice
B

20. the second choice
D

21. the first choice
A

22. $\frac{1}{2}$
$\frac{1}{2}x$

23. 12
$y = 12x$

24. 0.5
$y = 0.5x$

25. 18
$y = \frac{18}{x}$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing and Writing Functions (linear/non-linear)

26. 2

$$y = \frac{2}{x}$$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variation and Problem Solving

1. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 7$ when $x = 14$

   Find the constant of variation k.

   k = ☐ (Type an integer or a fraction. Simplify your answer.)

   Write the direct variation equation.

   y = ☐

---

2. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 1$ when $x = \frac{1}{7}$

   Find the constant of variation k.

   k = ☐ (Type an integer or a fraction. Simplify your answer.)

   Write the direct variation equation.

   ☐

---

3. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 0.6$ when $x = 0.6$

   Find the constant of variation k.

   k = ☐ (Round to one decimal place.)

   Write the direct variation equation.

   ☐

Student: ______ **Date:** ______ **Time:** ______	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variation and Problem Solving

4. The number of kilograms of water in a human body varies directly as the mass of the body. A 96-kg person contains 64 kg of water. How many kilograms of water are in a 78-kg person?

☐ kg of water are in a 78-kg person.

5. Charles' law states that if the pressure P stays the same, the volume V of a gas is directly proportional to its temperature T. If a balloon is filled with 28 cubic meters of a gas at a temperature of 200 K, find the new volume if the temperature rises to 400 K while the pressure stays the same.

The volume is ☐ m^3.

6. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$y = 5$ when $x = 7$

Find the constant of variation k.

$k =$ ☐ (Simplify your answer.)

Write the inverse variation equation.

☐

7. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$y = \frac{1}{5}$ when $x = 30$

Find the constant of variation k.

$k =$ ☐ (Simplify your answer.)

Write the inverse variation equation.

☐

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variation and Problem Solving

8. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

   $y = 0.8$ when $x = 0.9$

   Find the constant of variation k.

   $k = \square$ (Round to two decimal places as needed.)

   Write the inverse variation equation.

   $\square$

9. Pairs of markings a set distance apart are made on highways so that police can detect drivers exceeding the speed limit. Over a fixed distance, the speed R varies inversely with the time T. In one particular pair of markings, R is 54 mph when T is 7 seconds. Find the speed of a car that travels the given distance in 9 seconds.

   $R = \square$ mph (Round to the nearest whole number.)

10. The current I in an electrical conductor varies inversely as the resistance R of the conductor. The current is $\frac{1}{4}$ ampere when the resistance is 5376 ohms. What is the current when the resistance is 16464 ohms?

    The current is $\square$ ampere.
    (Simplify your answer. Type an integer or a fraction.)

11. Write the statement as an equation.

    r varies jointly as c and q.

    $\square = k\square$

Student: ______	Instructor: Darlene Ford	Assignment: Variation and Problem Solving
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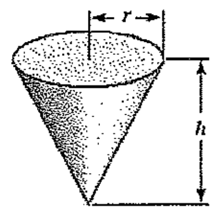
12. The volume of a cone varies jointly as the square of its radius and its height. If the volume of a cone is 18π cubic inches when the radius is 3 inches and the height is 6 inches, find the volume of a cone when the radius is 5 inches and the height is 3 inches.



The volume is $\square$ in^3. (Express your answer in terms of π.)

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1. $\frac{1}{2}$

   $\frac{1}{2}x$

2. 7

   $y = 7x$

3. 1

   $y = 1x$

4. 52

5. 56

6. 35

   $y = \frac{35}{x}$

7. 6

   $y = \frac{6}{x}$

8. 0.72

   $y = \frac{0.72}{x}$

9. 42

10. $\frac{4}{49}$

11. r

    cq

12. 25π

Student: ____________________
Date: ____________________
Time: ____________________

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Course: Algebra I Martin-Gay
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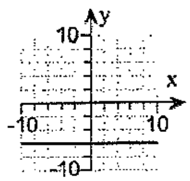
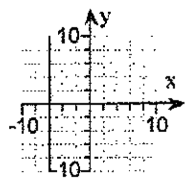
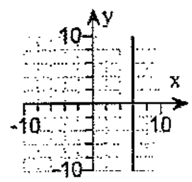
Assignment: Functions (linear/non-linear) Quiz

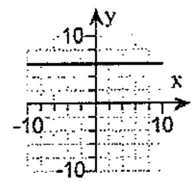
1. Determine the graph of the linear equation $x - 3 = 3$.

Choose the correct answer below.

○ A.


○ B.


○ C.


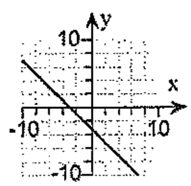
○ D.


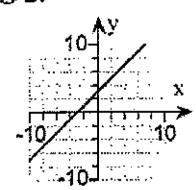
2. Determine the graph of the linear equation $x + y = 3$ by finding the x- and y-intercepts. Then write the equation using function notation.

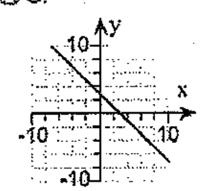
The x-intercept is ☐.

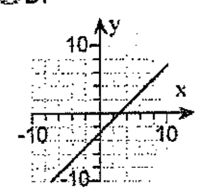
The y-intercept is ☐.

Choose the correct graph for the equation.

○ A.


○ B.


○ C.


○ D.


Type the equation using function notation.

$f(x) =$ ☐
(Use integers or fractions for any numbers in the expression.)

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Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Functions (linear/non-linear) Quiz

3. Complete ordered pairs for the equation, and then graph the equation.

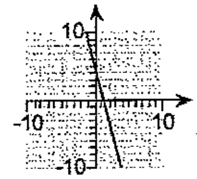
$x + 4y = 5$

$(0, \square)$
(Simplify your answer. Type an integer or a fraction.)

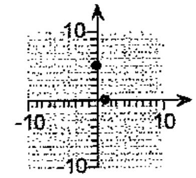
$(\square, 0)$
(Simplify your answer. Type an integer or a fraction.)

Choose the correct graph of the equation from the choices on the right.

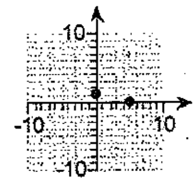
○ A.



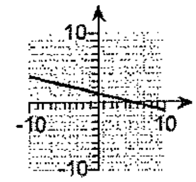
○ B.



○ C.



○ D.

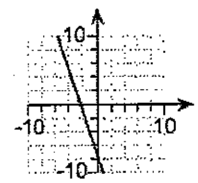


4. Graph the linear function.

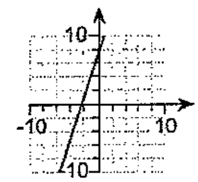
$f(x) = -3x + 7$

Choose the correct graph.

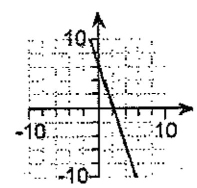
○ A.



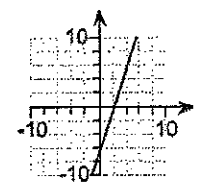
○ B.



○ C.



○ D.



5. Find the equation of the line through $(-4,2)$ and $(-10,3)$. Write the equation in standard form.

The equation is $\square$.
(Type the equation using integers. Simplify your answer.)

Student: ____________________
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Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

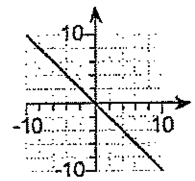
Assignment: Functions (linear/non-linear) Quiz

6. Graph the linear function.

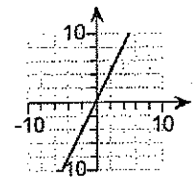
$f(x) = -2x$

Choose the correct graph.

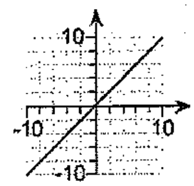
A.



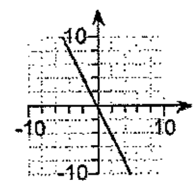
B.



C.



D.



7. Write an equation of the line containing the given point and parallel to the given line.

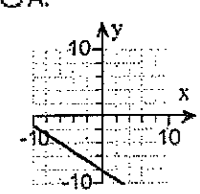
$(3,-3)$; $3x - 2y = 7$

The equation of the line is $y = \square$.
(Simplify your answer. Type your answer in slope-intercept form.)

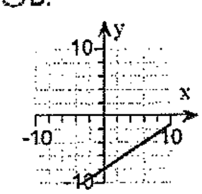
8. Determine the graph of the linear function $f(x) = \frac{2}{3}x + 8$.

Choose the correct answer below.

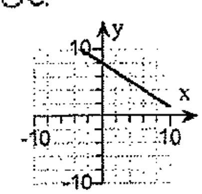
A.



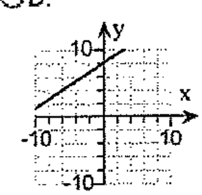
B.



C.



D.



9. Find an equation of the line passing through the given points. Use function notation to write the equation.

(2,3) and (6,5)

$f(x) = \square$
(Simplify your answer. Type in the form $f(x) = mx + b$.)

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Functions (linear/non-linear) Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

10. Find the equation of the line through $(8,-2)$ and perpendicular to $2x+7y=8$. Write the equation in standard form.

The equation is $\square$.
(Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Functions (linear/non-linear) Quiz

1. C

---

2. (3,0)
   (0,3)
   C
   $-x+3$

---

3. $\frac{5}{4}$
   5
   D

---

4. C

---

5. $x+6y=8$

---

6. D

---

7. $\frac{3}{2}x-\frac{15}{2}$

---

8. D

---

9. $\frac{1}{2}x+2$

---

10. $-7x+2y=-60$

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Variation and Problem Solving Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 3$ when $x = 6$

   Find the constant of variation k.

   k = ☐ (Type an integer or a fraction. Simplify your answer.)

   Write the direct variation equation.

   y = ☐

---

2. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 2$ when $x = \frac{1}{5}$

   Find the constant of variation k.

   k = ☐ (Type an integer or a fraction. Simplify your answer.)

   Write the direct variation equation.

   ☐

---

3. If y varies directly as x, find the constant of variation k and the direct variation equation for the situation.

   $y = 0.5$ when $x = 0.8$

   Find the constant of variation k.

   k = ☐ (Round to one decimal place.)

   Write the direct variation equation.

   ☐

4. The number of kilograms of water in a human body varies directly as the mass of the body. A 93-kg person contains 62 kg of water. How many kilograms of water are in a 78-kg person?

☐ kg of water are in a 78-kg person.

5. Charles' law states that if the pressure P stays the same, the volume V of a gas is directly proportional to its temperature T. If a balloon is filled with 25 cubic meters of a gas at a temperature of 38 K, find the new volume if the temperature rises to 380 K while the pressure stays the same.

The volume is ☐ m^3.

6. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$$y = 3 \text{ when } x = 4$$

Find the constant of variation k.

$k =$ ☐ (Simplify your answer.)

Write the inverse variation equation.

☐

7. If y varies inversely as x, find the constant of variation k and the inverse variation equation for the situation.

$$y = \frac{1}{7} \text{ when } x = 14$$

Find the constant of variation k.

$k =$ ☐ (Simplify your answer.)

Write the inverse variation equation.

☐

Student: ______	Instructor: Darlene Ford	Assignment: Variation and Problem Solving Quiz
Date: ______	Course: Algebra I Martin-Gay	
Time: ______	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

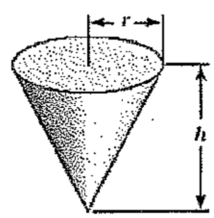
8. Pairs of markings a set distance apart are made on highways so that police can detect drivers exceeding the speed limit. Over a fixed distance, the speed R varies inversely with the time T. In one particular pair of markings, R is 72 mph when T is 3 seconds. Find the speed of a car that travels the given distance in 4 seconds.

R = ☐ mph (Round to the nearest whole number.)

9. The current I in an electrical conductor varies inversely as the resistance R of the conductor. The current is $\frac{1}{2}$ ampere when the resistance is 480 ohms. What is the current when the resistance is 3000 ohms?

The current is ☐ ampere.
(Simplify your answer. Type an integer or a fraction.)

10. The volume of a cone varies jointly as the square of its radius and its height. If the volume of a cone is 18π cubic inches when the radius is 3 inches and the height is 6 inches, find the volume of a cone when the radius is 2 inches and the height is 3 inches.



The volume is ☐ in^3. (Express your answer in terms of π.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Variation and Problem Solving Quiz

1. $\frac{1}{2}$

   $\frac{1}{2}x$

2. 10

   $y = 10x$

3. 0.6

   $y = 0.6x$

4. 52

5. 250

6. 12

   $y = \frac{12}{x}$

7. 2

   $y = \frac{2}{x}$

8. 54

9. $\frac{2}{25}$

10. 4π

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities

1. If $A = \{x \mid x \text{ is an odd integer}\}$, $B = \{x \mid x \text{ is an even integer}\}$, $C = \{2, 3, 4, 5\}$, and $D = \{3, 4, 5, 6\}$, list the element(s) of the following set.

   $A \cap D$

   $A \cap D = \{\square\}$ (Use a comma to separate elements in the set.)

---

2. If $A = \{x \mid x \text{ is an odd integer}\}$, $B = \{x \mid x \text{ is an even integer}\}$, $C = \{2, 3, 4, 5\}$, and $D = \{16, 17, 18, 19\}$, list the element(s) of the following set.

   $C \cup D$

   $C \cup D = \{\square\}$
   (Use ascending order. Use a comma to separate answers as needed.)

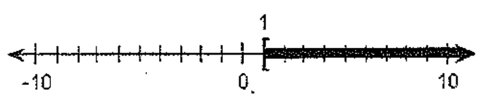
---

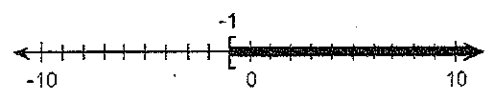
3. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

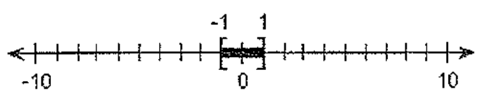
   $x + 2 \geq 1$ and $3x - 1 \geq 2$

   The solution set is $\square$.
   (Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

   Choose which graph represents the solution set of $x + 2 \geq 1$ and $3x - 1 \geq 2$.

   ○A.
   

   ○B.
   

   ○C.
   

   ○D. The solution set is $\varnothing$.

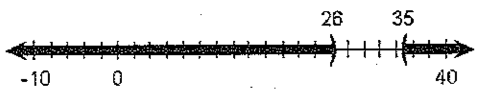
Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Compound Inequalities
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

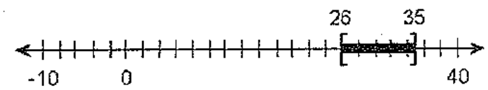
4. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

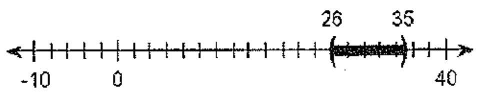
$6 < x - 20 < 15$

The solution set is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $6 < x - 20 < 15$.

○A. 

○B. 

○C. 

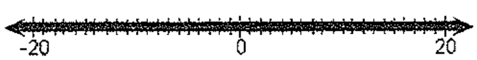
○D. The solution set is ∅.

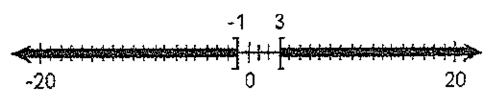
5. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

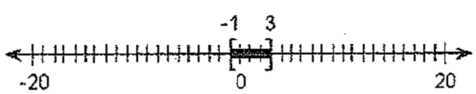
$-12 \le 6x - 6 \le 12$

The solution set is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $-12 \le 6x - 6 \le 12$.

○A. 

○B. 

○C. 

○D. The solution set is ∅.

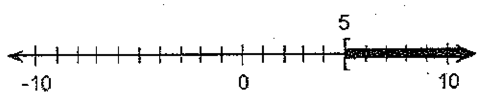
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities

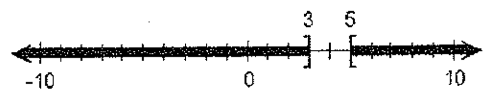
6. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

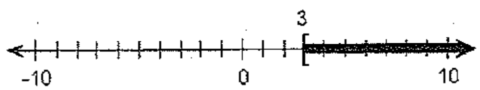
$$-3x \leq -9 \text{ or } 3x - 13 \geq 2$$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $-3x \leq -9$ or $3x - 13 \geq 2$.

○A.


○B.


○C.


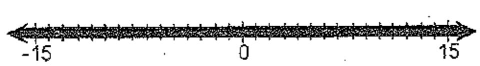
○D. The solution set is $\varnothing$.

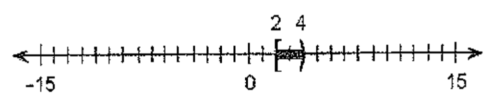
7. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

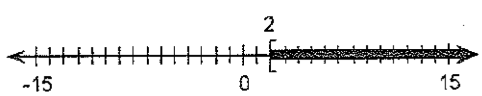
$$4(x-3) < 4 \text{ or } x + 6 \geq 8$$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $4(x-3) < 4$ or $x + 6 \geq 8$.

○A.


○B.


○C.


○D. The solution set is $\varnothing$.

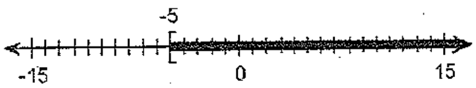
Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Compound Inequalities
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

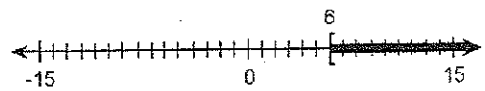
8. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

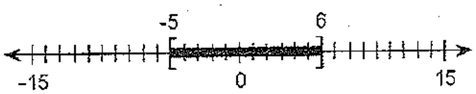
$x \geq -5$ or $x \geq 6$

The solution set is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $x \geq -5$ or $x \geq 6$.

○A.


○B.


○C.


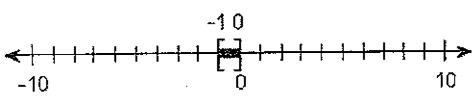
○D. The solution set is ∅.

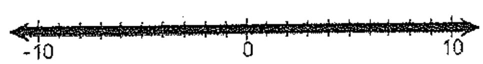
9. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

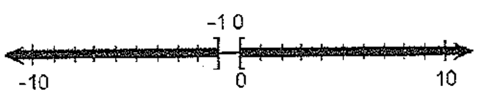
$x + 9 \geq 9$ and $x + 2 \leq 1$

The solution set is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $x + 9 \geq 9$ and $x + 2 \leq 1$.

○A.


○B.


○C.


○D. The solution set is ∅.

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Compound Inequalities

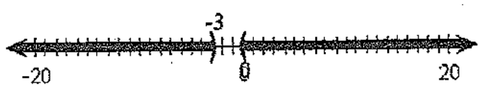
10. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

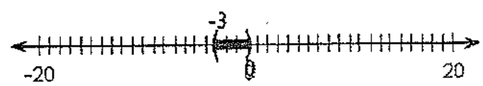
$$1 < \frac{3-5x}{3} < 6$$

The solution set is $\square$.

(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $1 < \frac{3-5x}{3} < 6$.

○A. 

○B. 

○C. 

○D. The solution set is $\varnothing$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities

1. 3, 5

2. 2, 3, 4, 5, 16, 17, 18, 19

3. $[1,\infty)$
A

4. $(26,35)$
C

5. $[-1,3]$
C

6. $[3,\infty)$
C

7. $(-\infty,\infty)$
A

8. $[-5,\infty)$
A

9. N
D

10. $(-3,0)$
B

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Equations

1. Solve.

   $|x| = 19$

   The solution set is $\{\square\}$.
   (Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

2. Solve.

   $|7x - 7| = 17$

   The solution set is $\{\square\}$.
   (Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

3. Solve.

   $\left|\frac{x}{8} - 6\right| = 6$

   The solution set is $\{\square\}$.
   (Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

4. Solve.

   $|5x| + 2 = 27$

   The solution set is $\{\square\}$.
   (Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

5. Solve.

   $|8x| = 0$

   The solution set is $\{\square\}$.
   (Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Equations

6. Solve the absolute value equation.

$$|3n+2|+4=0$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

7. Solve.

$$|z+1|=|z-8|$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

8. Solve the absolute value equation.

$$|33-6x|=4$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

9. Solve the absolute value equation.

$$\left|\frac{z}{6}-9\right| = -7$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

10. Solve the absolute value equation.

$$|14n+20|=0$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Absolute Value Equations
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

11. Solve the absolute value equation.

$$|8+3c| - 8 = -5$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

12. Solve.

$$\left|\frac{7x-8}{3}\right| = 3$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Equations

1. $19, -19$

2. $\frac{24}{7}, -\frac{10}{7}$

3. $96, 0$

4. $5, -5$

5. 0

6. N

7. $\frac{7}{2}$

8. $\frac{29}{6}, \frac{37}{6}$

9. N

10. $-\frac{10}{7}$

11. $-\frac{5}{3}, -\frac{11}{3}$

12. $\frac{17}{7}, -\frac{1}{7}$

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

1. Solve the inequality. Then graph the solution set.

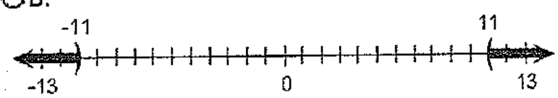
$|x| \leq 11$

The solution is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

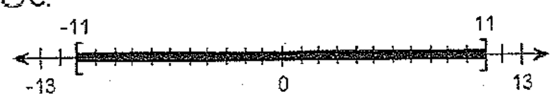
Choose the correct graph below.

○ A.

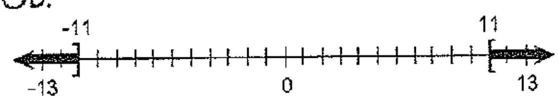
○ B.



○ C.



○ D.



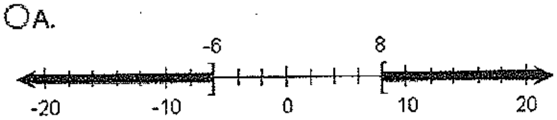
2. Solve the inequality. Then graph the solution set.

$|x - 1| < 7$

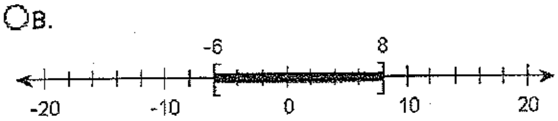
The solution is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

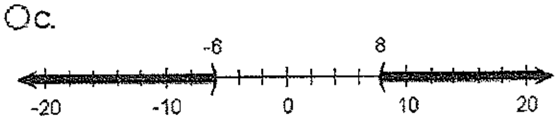
○ A.



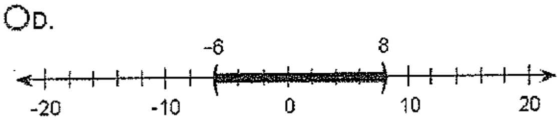
○ B.



○ C.



○ D.



Student: ________	Instructor: Darlene Ford	Assignment: Absolute Value Inequalities
Date: ________	Course: Algebra I Martin-Gay	
Time: ________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

3. Solve the inequality. Then graph the solution set.

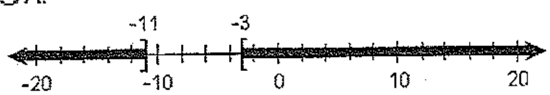
$|x+7|<4$

The solution is $\square$.

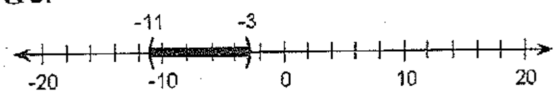
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

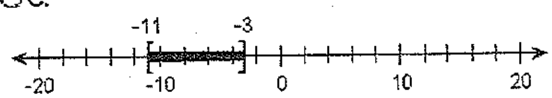
○ A.



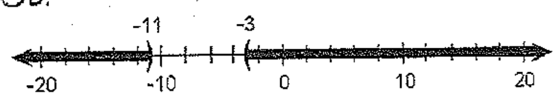
○ B.



○ C.



○ D.



4. Solve the inequality. Then graph the solution set.

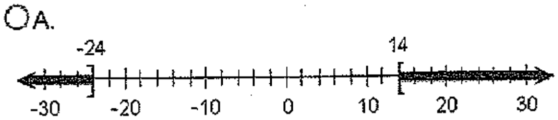
$|x+5|\geq 19$

The solution is $\square$.

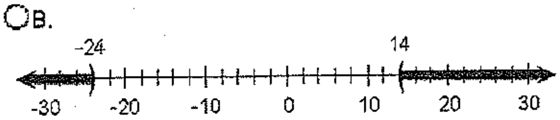
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

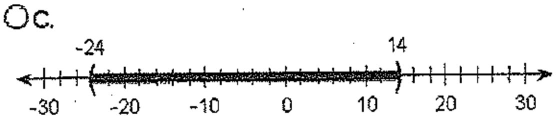
○ A.



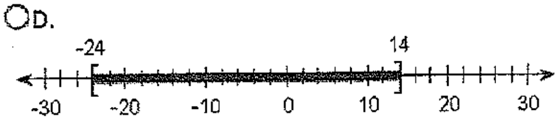
○ B.



○ C.



○ D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Absolute Value Inequalities
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

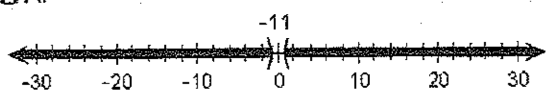
5. Solve the inequality. Then graph the solution set.

$|x| + 7 > 8$

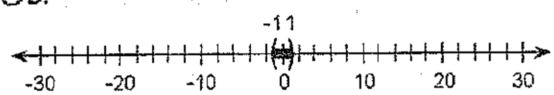
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

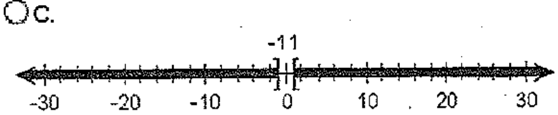
○A.



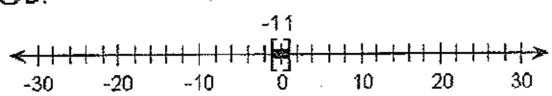
○B.



○C.



○D.



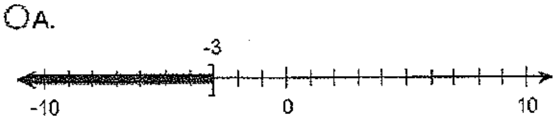
6. Solve the inequality. Then graph the solution set.

$|5x + 15| \le 0$

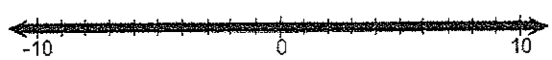
The solution is $\square$.
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

Choose the correct graph below.

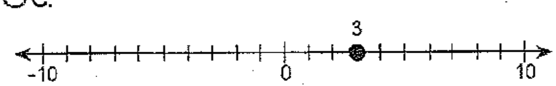
○A.



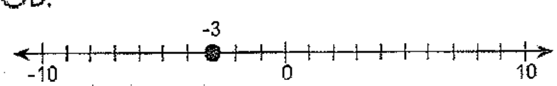
○B.



○C.



○D.



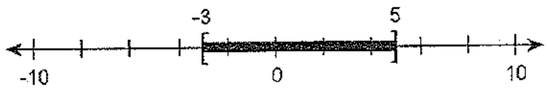
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

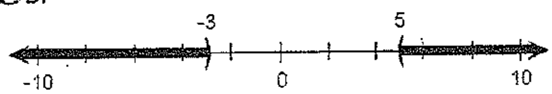
7. Solve the inequality. Then graph the solution set.

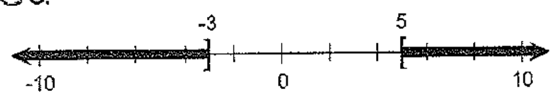
$$|3x-3|-5 \leq 7$$

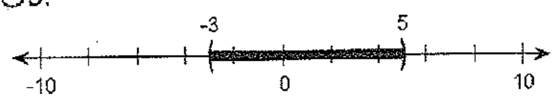
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

○A.


○B.


○C.


○D.


8. Solve the equation for x.

$$|3x-6|=11$$

$x = \square$
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

9. Solve the inequality for x.

$$|2x+3|+2<9$$

The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

10. Solve the equation for x.

$$|6x-10|+5=17$$

$x = \square$
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

Student: ______________	**Instructor:** Darlene Ford	**Assignment:** Absolute Value Inequalities
Date: ______________	**Course:** Algebra I Martin-Gay	
Time: ______________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

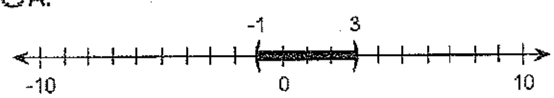
11. Solve the inequality. Then graph the solution set.

$$|5x-5| < -10$$

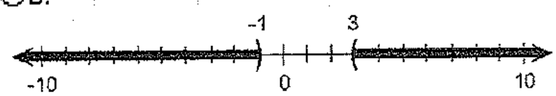
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

○A.

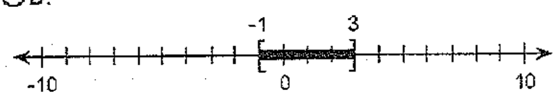


○B.



○C.
The graph contains no points.

○D.



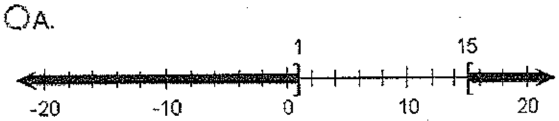
12. Solve the inequality. Then graph the solution set.

$$|x-8|-8 \le -1$$

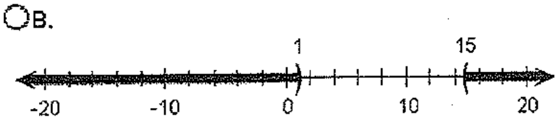
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

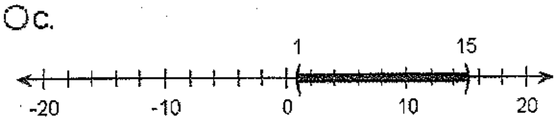
○A.



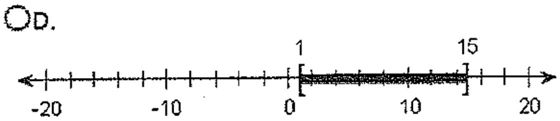
○B.



○C.



○D.



Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

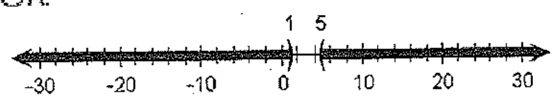
13. Solve this inequality. Then graph the solution set.

$|3x-9|+4>10$

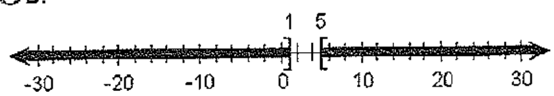
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

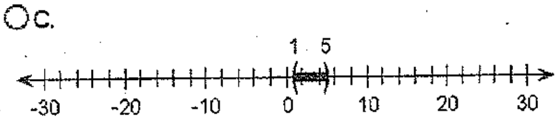
○A.



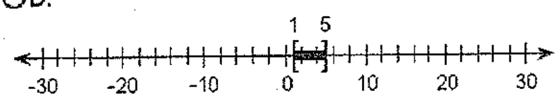
○B.



○C.



○D.



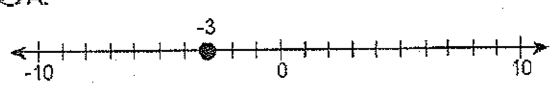
14. Solve the inequality. Then graph the solution set.

$|3x+9|>0$

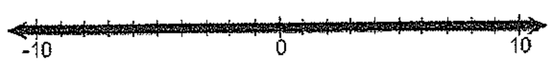
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

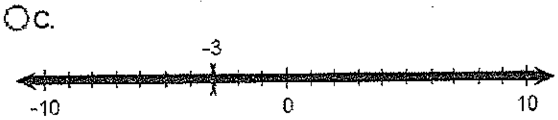
○A.



○B.



○C.



○D.
The graph contains no points.

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

15. Solve the inequality. Then graph the solution set.

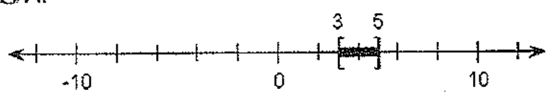
$$|0.2x - 0.8| > 0.2$$

The solution is $\square$.

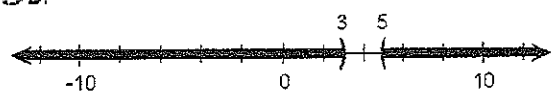
(Type your answer in interval notation. Simplify your answer. Use integers or decimals for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

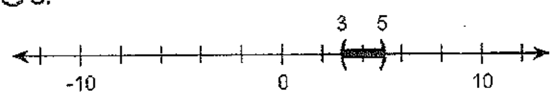
○ A.



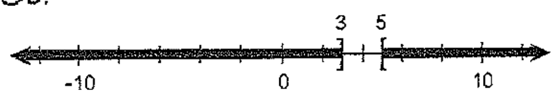
○ B.



○ C.



○ D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

1. $[-11,11]$
   C

2. $(-6,8)$
   D

3. $(-11,-3)$
   B

4. $(-\infty,-24] \cup [14,\infty)$
   A

5. $(-\infty,-1) \cup (1,\infty)$
   A

6. -3
   D

7. $[-3,5]$
   A

8. $\frac{17}{3}, -\frac{5}{3}$

9. $(-5,2)$

10. $\frac{11}{3}, -\frac{1}{3}$

11. N
    C

12. $[1,15]$
    D

13. $(-\infty,1) \cup (5,\infty)$
    A

14. $(-\infty,-3) \cup (-3,\infty)$
    C

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities

15. $(-\infty,3) \cup (5,\infty)$
B

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear and Systems of Inequalities
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Determine if the ordered pairs $(-5,4)$ and $(-5,4)$ are solutions of the following linear inequality in two variables.

$-2x + 2y \le 2$

Is the ordered pair $(-5,4)$ a solution of the linear inequality?

○ No

○ Yes

Is the ordered pair $(-5,4)$ a solution of the linear inequality?

○ Yes

○ No

2. Determine if the ordered pairs $(4,3)$ and $(3,-5)$ are solutions of the following linear inequality in two variables.

$-x < -y$

Is the ordered pair $(4,3)$ a solution of the linear inequality?

○ No

○ Yes

Is the ordered pair $(3,-5)$ a solution of the linear inequality?

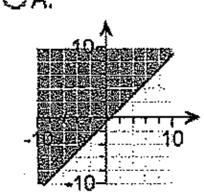
○ No

○ Yes

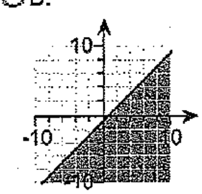
3. Choose which graph best represents the following inequality.

$x + y \le -1$

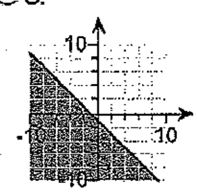
○A.



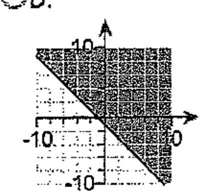
○B.



○C.



○D.



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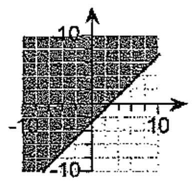
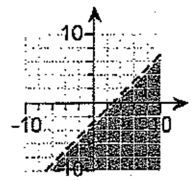
4. Choose which graph represents the following inequality.

$$-3x + 3y > -9$$

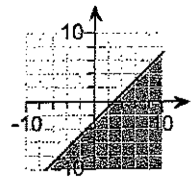
○A.



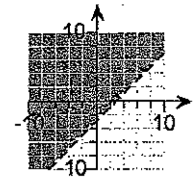
○B.



○C.



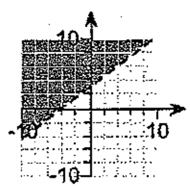
○D.



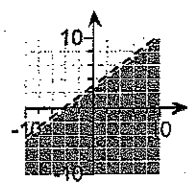
5. Choose which graph represents the following inequality.

$$-3x + 4y > 12$$

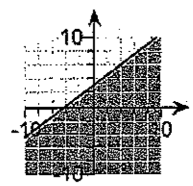
○A.



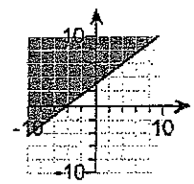
○B.



○C.



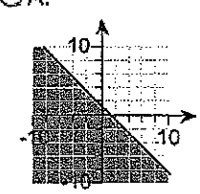
○D.



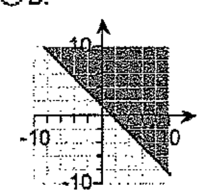
6. Choose which graph represents the following inequality.

$$2x + 2y > 3$$

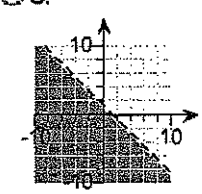
○A.



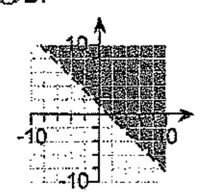
○B.



○C.



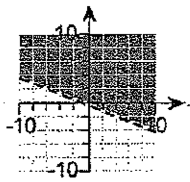
○D.



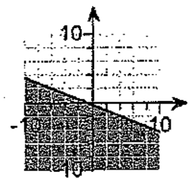
7. Choose which graph represents the following inequality.

$2x + 5y \geq -2$

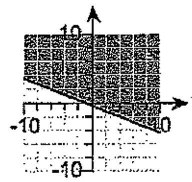
○A.



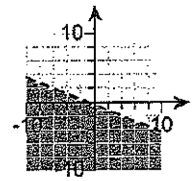
○B.



○C.



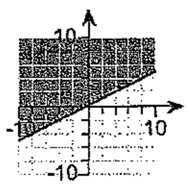
○D.



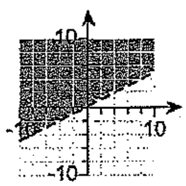
8. Choose which graph represents the following inequality.

$x > 2y$

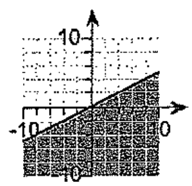
○A.



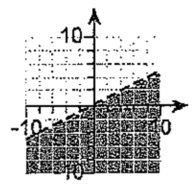
○B.



○C.



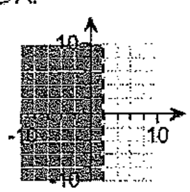
○D.



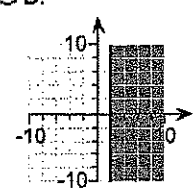
9. Choose which graph represents the following inequality.

$x \leq 2$

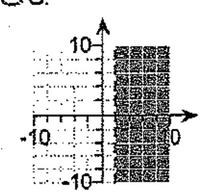
○A.



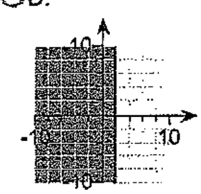
○B.



○C.



○D.



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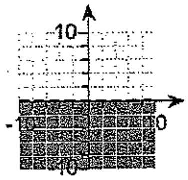
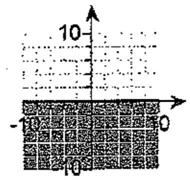
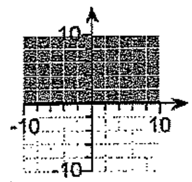
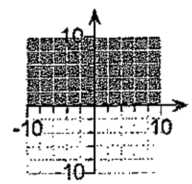
10. Choose which graph represents the following inequality.

$y \geq 0$

○A.


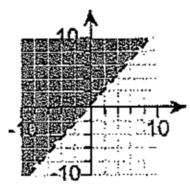
○B.


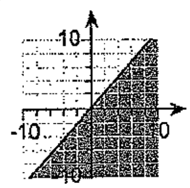
○C.


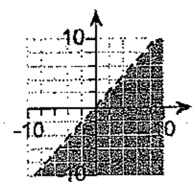
○D.


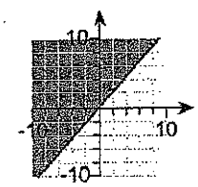
11. Choose which graph represents the following inequality.

$-10x + 9y > 0$

○A.


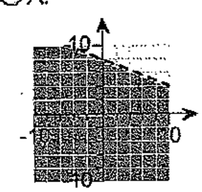
○B.


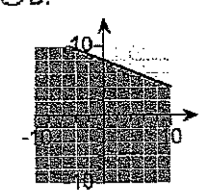
○C.


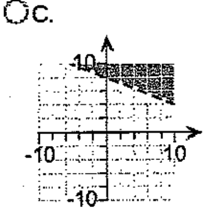
○D.


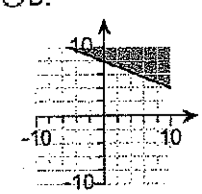
12. Choose which graph represents the following inequality.

$\frac{1}{5}x + \frac{1}{2}y > 4$

○A.


○B.


○C.


○D.


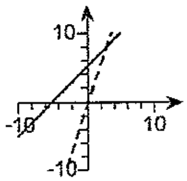
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities

13. Graph the solution of the given system of linear inequalities.

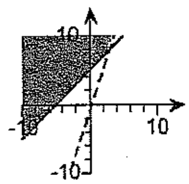
$$\begin{cases} y < 3x - 1 \\ y \le x + 5 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

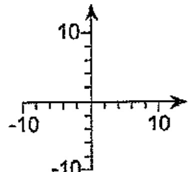
○A.



○B.

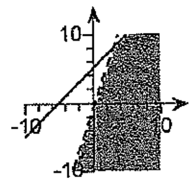


○C.



No Solution

○D.

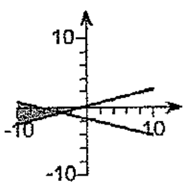


14. Graph the solution of the given system of linear inequalities.

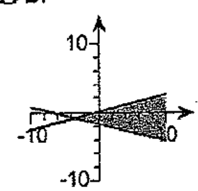
$$\begin{cases} x \ge 4y \\ x + 4y \le -7 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

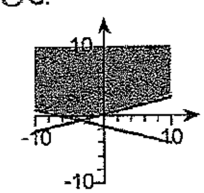
○A.



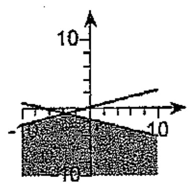
○B.



○C.



○D.

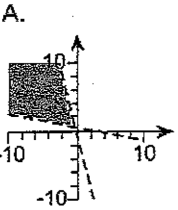


15. Graph the solution of the given system of linear inequalities.

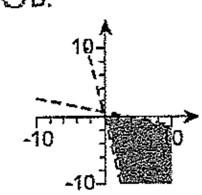
$$\begin{cases} -4x < y \\ x + 5y < 3 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

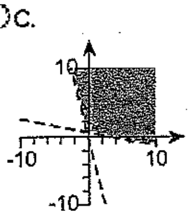
○A.



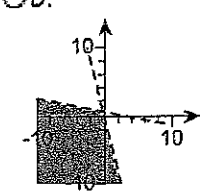
○B.



○C.



○D.



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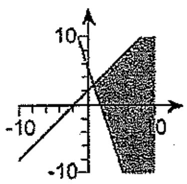
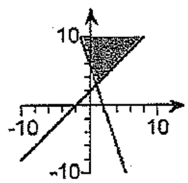
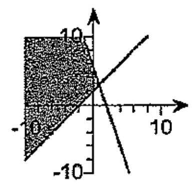
16. Graph the solution of the given system of linear inequalities.

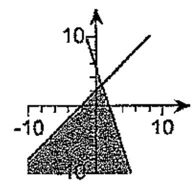
$$\begin{cases} 5x - 5y \geq -10 \\ 3x + y \leq 6 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

○A.


○B.


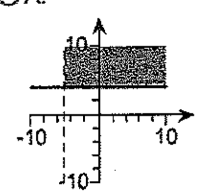
○C.


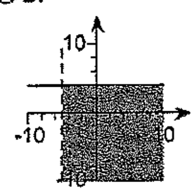
○D.


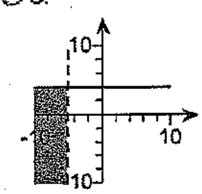
17. Graph the solution of the given system of linear inequalities.

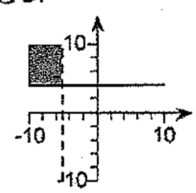
$$\begin{cases} y \leq 4 \\ x < -5 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

○A.


○B.


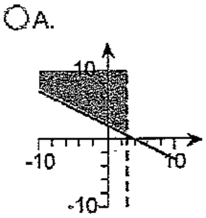
○C.


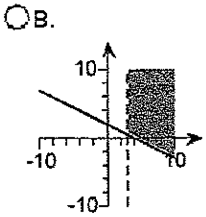
○D.


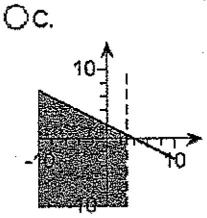
18. Graph the solution of the given system of linear inequalities.

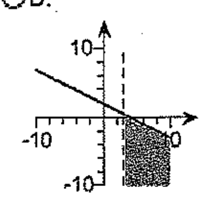
$$\begin{cases} 2x + 4y \leq 8 \\ x < 3 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

○A.


○B.


○C.


○D.


Student: ____________________
Date: ____________________
Time: ____________________

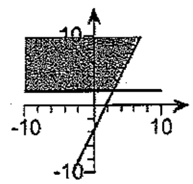
Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

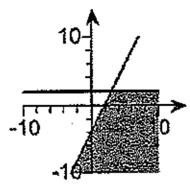
Assignment: Graphing Linear and Systems of Inequalities

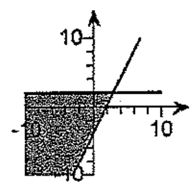
19. Graph the solution of the given system of linear inequalities.

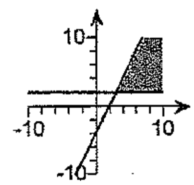
$$\begin{cases} 4x - 2y \le 8 \\ y \le 2 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

○A.


○B.


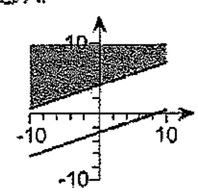
○C.


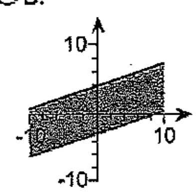
○D.


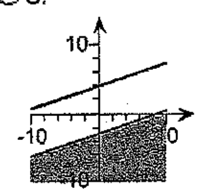
20. Graph the solution of the given system of linear inequalities.

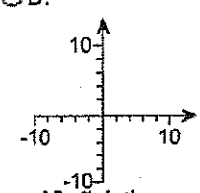
$$\begin{cases} y \ge \dfrac{1}{3}x + 4 \\ y \le \dfrac{1}{3}x - 3 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

○A.


○B.


○C.


○D.


No Solution

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities

1. the first choice
   the second choice

2. the second choice
   the second choice

3. C

4. D

5. A

6. D

7. C

8. D

9. D

10. C

11. A

12. C

13. D

14. D

15. B

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities

16. D

17. C

18. C

19. C

20. D

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Compound Inequalities Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. If $A = \{x \mid x \text{ is an odd integer}\}$, $B = \{x \mid x \text{ is an even integer}\}$, $C = \{2, 3, 4, 5\}$, and $D = \{12, 13, 14, 15\}$, list the element(s) of the following set.

$A \cap D$

$A \cap D = \{\square\}$ (Use a comma to separate elements in the set.)

---

2. If $A = \{x \mid x \text{ is an odd integer}\}$, $B = \{x \mid x \text{ is an even integer}\}$, $C = \{2, 3, 4, 5\}$, and $D = \{9, 10, 11, 12\}$, list the element(s) of the following set.

$C \cup D$

$C \cup D = \{\square\}$

(Use ascending order. Use a comma to separate answers as needed.)

---

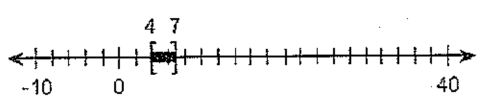
3. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

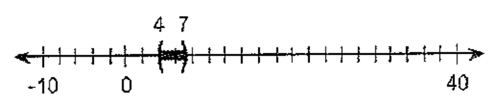
$2 < x - 2 < 5$

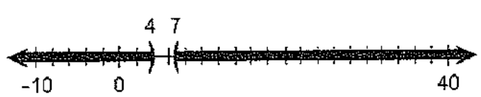
The solution set is $\square$.

(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $2 < x - 2 < 5$.

○A.


○B.


○C.


○D. The solution set is $\varnothing$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities Quiz

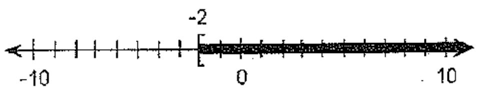
4. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

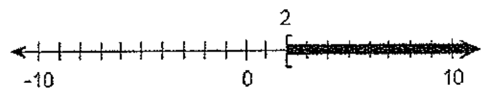
$x + 8 \geq 6$ and $2x - 3 \geq 1$

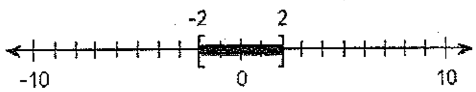
The solution set is ☐.

(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $x + 8 \geq 6$ and $2x - 3 \geq 1$.

○A. 

○B. 

○C. 

○D. The solution set is $\varnothing$.

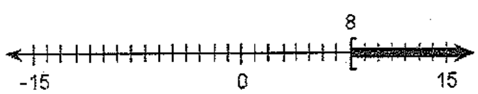
5. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

$x \geq -6$ or $x \geq 8$

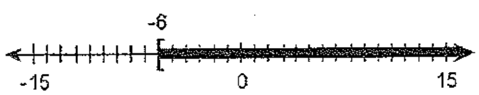
The solution set is ☐.

(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $x \geq -6$ or $x \geq 8$.

○A. 

○B. 

○C. 

○D. The solution set is $\varnothing$.

Student: ______	**Instructor:** Darlene Ford	**Assignment:** Compound Inequalities Quiz
Date: ______	**Course:** Algebra I Martin-Gay	
Time: ______	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

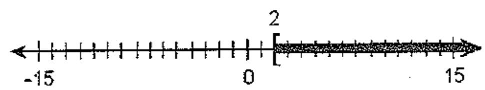
6. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

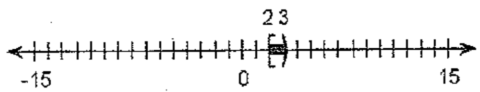
$2(x-2) < 2$ or $x+4 \geq 6$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $2(x-2) < 2$ or $x+4 \geq 6$.

○A.


○B.


○C.


○D. The solution set is $\varnothing$.

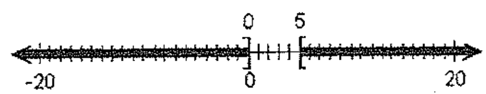
7. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

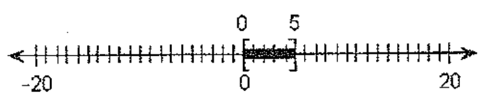
$-16 \leq 5x - 16 \leq 9$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $-16 \leq 5x - 16 \leq 9$.

○A.


○B.


○C.


○D. The solution set is $\varnothing$.

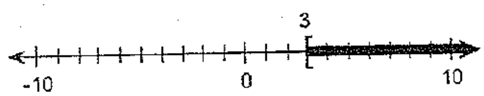
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities Quiz

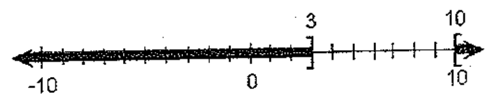
8. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

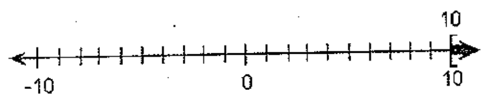
$-4x \leq -12$ or $3x - 22 \geq 8$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $-4x \leq -12$ or $3x - 22 \geq 8$.

○A. 

○B. 

○C. 

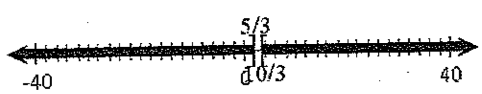
○D. The solution set is $\varnothing$.

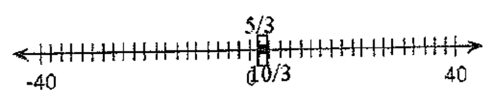
9. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

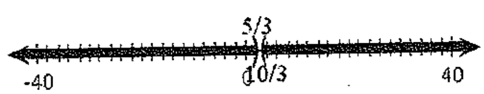
$5 \leq \frac{3}{5}x + 4 \leq 6$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $5 \leq \frac{3}{5}x + 4 \leq 6$.

○A. 

○B. 

○C. 

○D. The solution set is $\varnothing$.

Student: ____________________
Date: ____________________
Time: ____________________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Compound Inequalities Quiz

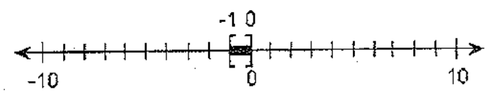
10. Solve the following compound inequality. Write the solution set in interval notation. Then, choose which graph best represents the solution set.

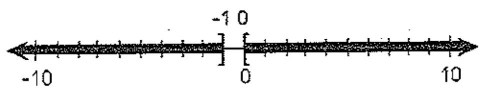
$x + 10 \geq 10$ and $x + 3 \leq 2$

The solution set is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose which graph represents the solution set of $x + 10 \geq 10$ and $x + 3 \leq 2$.

○A. 

○B. 

○C. 

○D. The solution set is $\varnothing$.

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Compound Inequalities Quiz

1. 13, 15

2. 2, 3, 4, 5, 9, 10, 11, 12

3. $(4,7)$
   B

4. $[2,\infty)$
   B

5. $[-6,\infty)$
   C

6. $(-\infty,\infty)$
   A

7. $[0,5]$
   C

8. $[3,\infty)$
   A

9. $\left[\frac{5}{3},\frac{10}{3}\right]$
   B

10. N
    D

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Absolute Value Equations Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
Time: ____________	**Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Solve.

$$|x| = 16$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

2. Solve.

$$|7x - 10| = 14$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

3. Solve.

$$\left|\frac{x}{3} - 5\right| = 10$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

4. Solve.

$$|2x| + 3 = 17$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

5. Solve.

$$|13x| = 0$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

6. Solve.

$$|6x - 17| = |10x + 9|$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

7. Solve the absolute value equation.

$$|9 - 6x| = 24$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

8. Solve the absolute value equation.

$$\left|\frac{z}{6} - 10\right| = -11$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

9. Solve the absolute value equation.

$$|1 + 10c| - 17 = -7$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

---

10. Solve the absolute value equation.

$$\left|\frac{5x - 3}{3}\right| = |-4|$$

The solution set is $\{\square\}$.
(Use a comma to separate answers as needed. Type R if the answer is all real numbers. Type N if the solution is the empty set.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Equations Quiz

1. $16, -16$

2. $\frac{24}{7}, -\frac{4}{7}$

3. $45, -15$

4. $7, -7$

5. 0

6. $-\frac{13}{2}, \frac{1}{2}$

7. $-\frac{5}{2}, \frac{11}{2}$

8. N

9. $\frac{9}{10}, -\frac{11}{10}$

10. $3, -\frac{9}{5}$

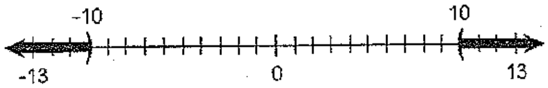
Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities Quiz

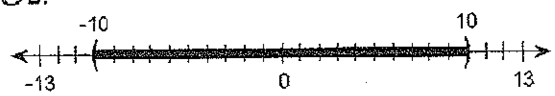
1. Solve the inequality. Then graph the solution set.

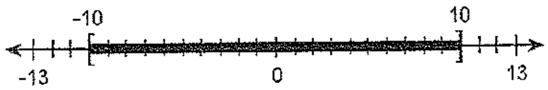
$|x| \leq 10$

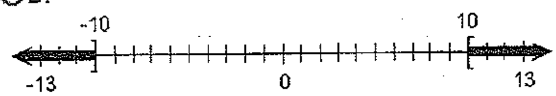
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

A.


B.


C.


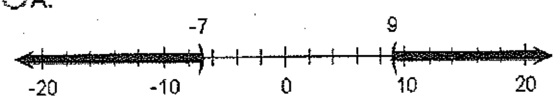
D.


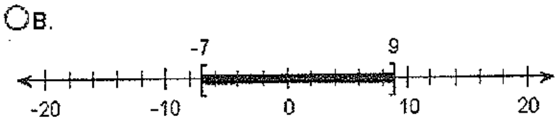
2. Solve the inequality. Then graph the solution set.

$|x - 1| < 8$

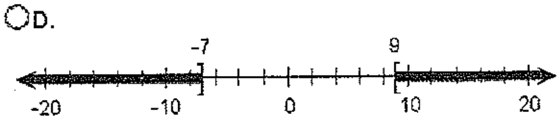
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

A.


B.


C.


D.


Student: ________ **Date:** ________ **Time:** ________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities Quiz

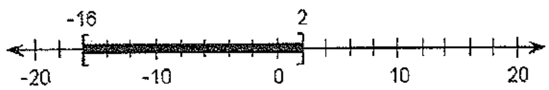
3. Solve the inequality. Then graph the solution set.

$|x+7|<9$

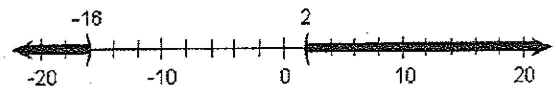
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

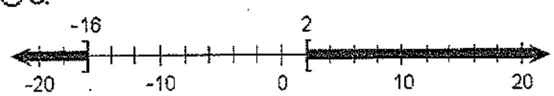
○A.



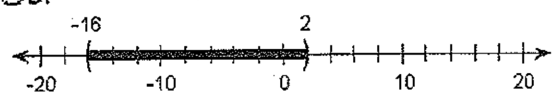
○B.



○C.



○D.



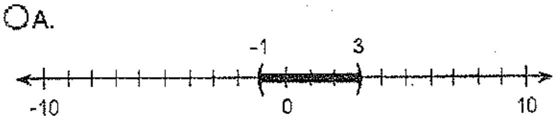
4. Solve the inequality. Then graph the solution set.

$|4x-4|<-8$

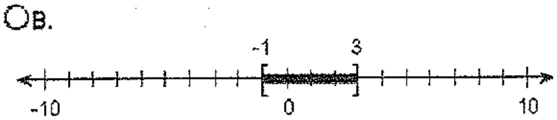
The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

○A.

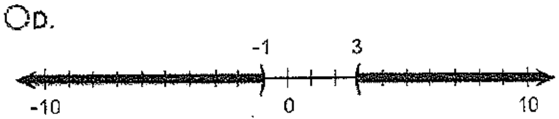


○B.



○C.
The graph contains no points.

○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities Quiz

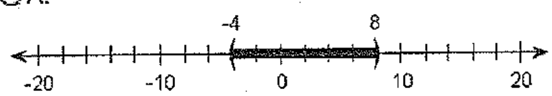
5. Solve the inequality. Then graph the solution set.

$$|x-2|-8 \leq -2$$

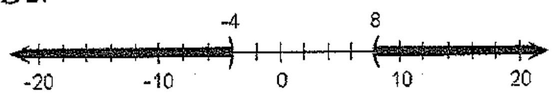
The solution is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

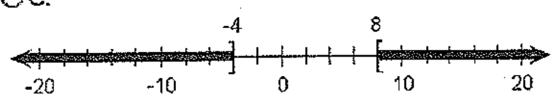
○A.



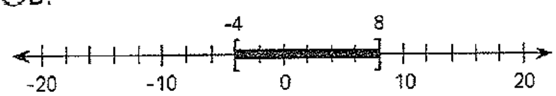
○B.



○C.



○D.



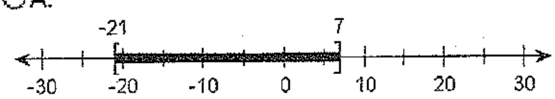
6. Solve the inequality. Then graph the solution set.

$$\left|\frac{5}{7}x+5\right| > 10$$

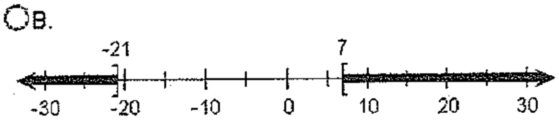
The solution is ☐.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Choose the correct graph below.

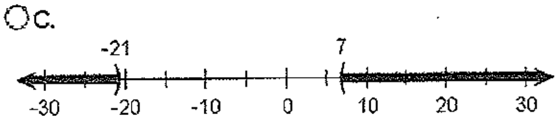
○A.



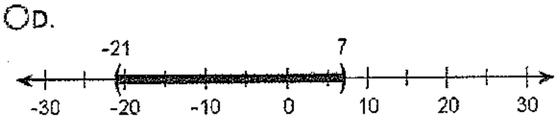
○B.



○C.



○D.



7. Solve the equation for x.

$$|11+6x|=0$$

x = ☐
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities Quiz

8. Solve the inequality for x.

$$|2x+9|+1<20$$

The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

9. Solve the equation for x.

$$|9x-1|+6=18$$

$x=\square$
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

10. Solve the inequality for x.

$$\left|\frac{2x+4}{4}\right|>4$$

The solution is $\square$.
(Type your answer in interval notation. Simplify your answer. Use integers or fractions for any numbers in the expression. Type N if there is no solution.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Absolute Value Inequalities Quiz

1. $[-10,10]$
   C

2. $(-7,9)$
   C

3. $(-16,2)$
   D

4. N
   C

5. $[-4,8]$
   D

6. $(-\infty,-21) \cup (7,\infty)$
   C

7. $-\frac{11}{6}$

8. $(-14,5)$

9. $\frac{13}{9}, -\frac{11}{9}$

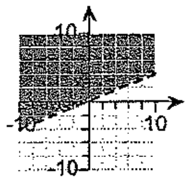
10. $(-\infty,-10) \cup (6,\infty)$

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities Quiz

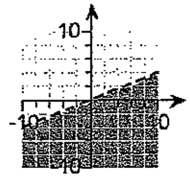
1. Choose which graph represents the following inequality.

$$-4x + 10y > 0$$

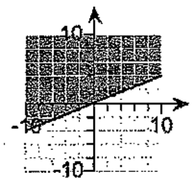
○A.



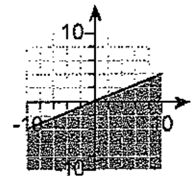
○B.



○C.



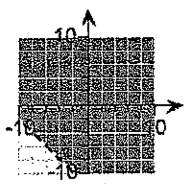
○D.



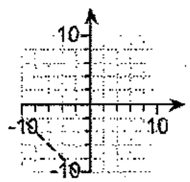
2. Choose which graph represents the following inequality.

$$-\frac{1}{3}x - \frac{1}{3}y > 4$$

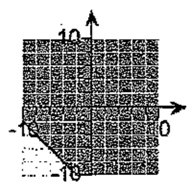
○A.



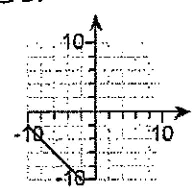
○B.



○C.



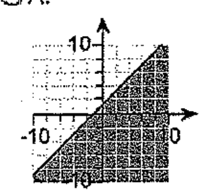
○D.



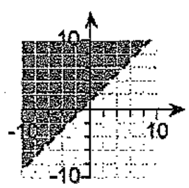
3. Choose which graph represents the following inequality.

$$-2x + 2y > 2$$

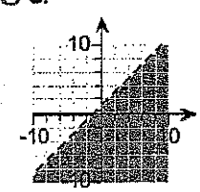
○A.



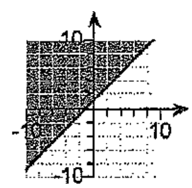
○B.



○C.



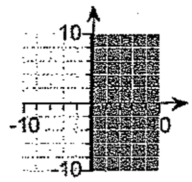
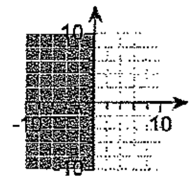
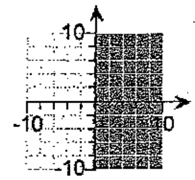
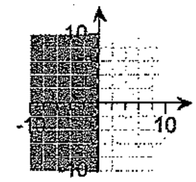
○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities Quiz

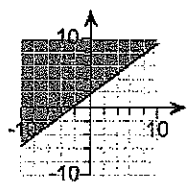
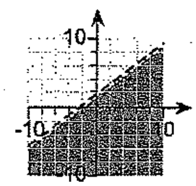
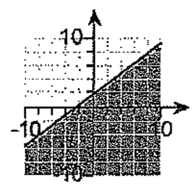
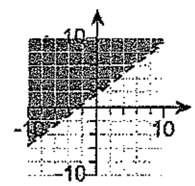
4. Choose which graph represents the following inequality.

$x \leq 0$

○A.

○B.

○C.

○D.


5. Choose which graph represents the following inequality.

$3x - 4y > -7$

○A.

○B.

○C.

○D.


6. Determine if the ordered pairs $(-4,-4)$ and $(-2,4)$ are solutions of the following linear inequality in two variables.

$-4x + 5y \leq 3$

Is the ordered pair $(-4,-4)$ a solution of the linear inequality?

○ No

○ Yes

Is the ordered pair $(-2,4)$ a solution of the linear inequality?

○ No

○ Yes

Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Graphing Linear and Systems of Inequalities Quiz
Date: ____________	**Course:** Algebra I Martin-Gay	
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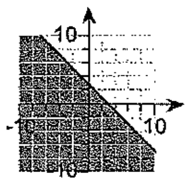
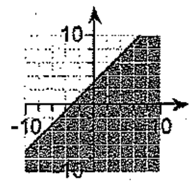
7. Choose which graph best represents the following inequality.

$x + y \geq 3$

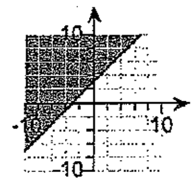
○A.



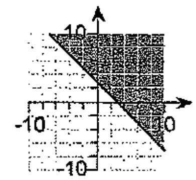
○B.



○C.



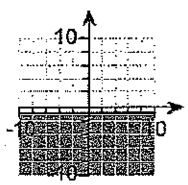
○D.



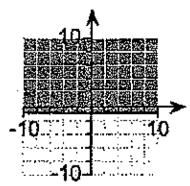
8. Choose which graph represents the following inequality.

$y \leq -1$

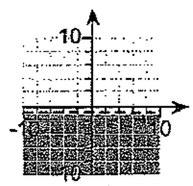
○A.



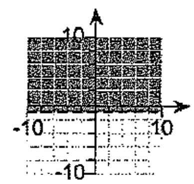
○B.



○C.



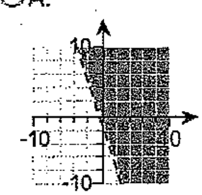
○D.



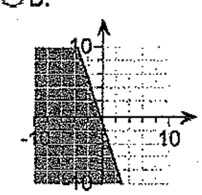
9. Choose which graph represents the following inequality.

$-3x - y \geq 1$

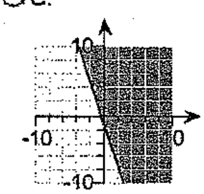
○A.



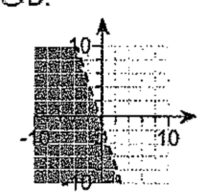
○B.



○C.



○D.



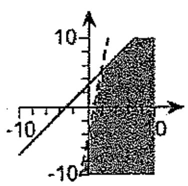
Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities Quiz

10. Graph the solution of the given system of linear inequalities.

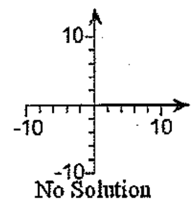
$$\begin{cases} y < 5x - 5 \\ y \le x + 3 \end{cases}$$

Select the graph below that represents the solution of the given system of inequalities.

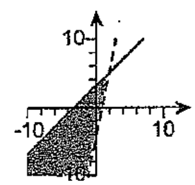
A.



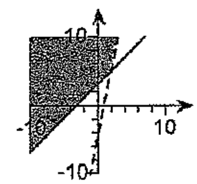
B.



C.



D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Graphing Linear and Systems of Inequalities Quiz

1. A

2. B

3. B

4. B

5. B

6. the second choice
the first choice

7. D

8. A

9. B

10. A

Student: ____________	Instructor: Darlene Ford	Assignment: Simplifying Radicals
Date: ____________	Course: Algebra I Martin-Gay	
Time: ____________	Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	

1. Find the square root.

$\sqrt{576}$

The square root is $\square$.
(Type N if the square root is not a real number.)

---

2. Simplify.

$$\sqrt{\frac{1}{49}}$$

$\sqrt{\frac{1}{49}} = \square$

---

3. Find the square root.

$\sqrt{0.0001}$

$\sqrt{0.0001} = \square$
(Type N if the square root is not a real number.)

---

4. Find the square root.

$\sqrt{324}$

The square root is $\square$.
(Type N if the square root is not a real number.)

---

5. Simplify.

$$\sqrt{\frac{1}{16}}$$

$\sqrt{\frac{1}{16}} = \square$

---

6. Find the square root.

$\sqrt{0.0016}$

$\sqrt{0.0016} = \square$
(Type N if the square root is not a real number.)

Student: ____________ Date: ____________ Time: ____________	Instructor: Darlene Ford Course: Algebra I Martin-Gay Book: Martin-Gay: Beginning & Intermediate Algebra, 3e	Assignment: Simplifying Radicals

7. Find the square root.

$-\sqrt{49}$

$-\sqrt{49} = \square$

(Round to the nearest thousandth as needed. Type N if the square root is not a real number.)

8. Simplify by factoring. Assume that all expressions under radicals represent nonnegative numbers.

$\sqrt{4x^6}$

$\sqrt{4x^6} = \square$

9. Find the root.

$\sqrt[3]{64}$

$\sqrt[3]{64} = \square$

(Type N if the root is not a real number.)

10. Find the cube root.

$\sqrt[3]{\frac{1}{729}}$

$\sqrt[3]{\frac{1}{729}} = \square$

11. Find the root. Assume that all variables represent nonnegative real numbers.

$-\sqrt[4]{256}$

The answer is $\square$.

12. Simplify the root.

$\sqrt[5]{x^{25}}$

$\sqrt[5]{x^{25}} = \square$ (Type N if the root is not a real number.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Radicals

13. Find the indicated root. Assume that all variables represent nonnegative real numbers.

$$\sqrt[4]{81x^4}$$

$\sqrt[4]{81x^4} = \square$

---

14. Find the root. Assume that the variable represents a positive number.

$$\sqrt{49x^8}$$

$\sqrt{49x^8} = \square$

---

15. Simplify by factoring. Assume that all expressions under radicals represent nonnegative numbers.

$\sqrt{x^6}$

$\sqrt{x^6} = \square$

(Type an exact answer, using radicals as needed.)

---

16. Simplify the radical.

$\sqrt{\dfrac{64}{9}}$

The answer is $\square$.

(Simplify your answer. Type an integer or a fraction. Type N if the square root is not a real number.)

---

17. If $f(x) = \sqrt{2x+3}$, find $f(0)$.

$f(0) = \square$ (Type an exact answer, using radicals as needed. Simplify your answer.)

---

18. Use the product rule for radicals to find the product.

$\sqrt{2} \cdot \sqrt{7}$

$\sqrt{2} \cdot \sqrt{7} = \square$

(Simplify your answer.)

Student: ________________ **Date:** ________________ **Time:** ________________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Radicals

19. Use the product rule to multiply.

$$\sqrt[3]{5} \cdot \sqrt[3]{6}$$

$\sqrt[3]{5} \cdot \sqrt[3]{6} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

20. Use the product rule to multiply.

$$\sqrt{3} \cdot \sqrt{4x}$$

$\sqrt{3} \cdot \sqrt{4x} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

21. Use the product rule to multiply.

$$\sqrt{\frac{2}{x}} \cdot \sqrt{\frac{3}{y}}$$

$\sqrt{\frac{2}{x}} \cdot \sqrt{\frac{3}{y}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

22. Use the product rule to multiply.

$$\sqrt[4]{6x^3} \cdot \sqrt[4]{5}$$

$\sqrt[4]{6x^3} \cdot \sqrt[4]{5} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Radicals

23. Use the quotient rule to simplify.

$$\sqrt{\frac{7}{36}}$$

$\sqrt{\frac{7}{36}} = \square$

(Type an exact answer, using radicals as needed. Use integers or fractions for any numbers in the expression. Simplify your answer.)

24. Use the quotient rule to simplify.

$$\sqrt[4]{\frac{x}{256}}$$

$\sqrt[4]{\frac{x}{256}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

25. Use the quotient rule to simplify.

$$\sqrt[3]{\frac{5}{8}}$$

$\sqrt[3]{\frac{5}{8}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

26. Simplify by factoring.

$\sqrt{40}$

$\sqrt{40} = \square$

(Type an exact answer, using radicals as needed.)

27. Simplify.

$$2\sqrt{12}$$

$2\sqrt{12} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Simplifying Radicals

28. Simplify.

$$\sqrt{9x^3}$$

$\sqrt{9x^3} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

29. Simplify.

$$\sqrt{25x^2y^4}$$

$\sqrt{25x^2y^4} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

30. Use the quotient rule to divide, then simplify, if possible.

$$\frac{\sqrt{20}}{\sqrt{5}}$$

$\frac{\sqrt{20}}{\sqrt{5}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

31. Use the quotient rule to divide, then simplify, if possible.

$$\frac{\sqrt[3]{9}}{\sqrt[3]{3}}$$

$\frac{\sqrt[3]{9}}{\sqrt[3]{3}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

32. Simplify.

$$4\sqrt{27} + \sqrt{48} - \sqrt{18}$$

$4\sqrt{27} + \sqrt{48} - \sqrt{18} = \square$

(Type an exact answer, using radicals as needed.)

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33. Add or subtract.

$$4-5\sqrt{y^6}-9\sqrt{y^6}+5$$

$4-5\sqrt{y^6}-9\sqrt{y^6}+5=\square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

---

34. Multiply.

$$\sqrt{2}(\sqrt{5}-\sqrt{3})$$

$\sqrt{2}(\sqrt{5}-\sqrt{3})=\square$

(Simplify your answer. Type an exact answer, using radicals as needed.)

---

35. Rationalize the denominator.

$$\frac{\sqrt{6}}{\sqrt{5}}$$

The answer is $\square$.

---

36. Simplify.

$$\sqrt{\frac{1}{5}}$$

The answer is $\square$.

(Type an exact answer, using radicals as needed.)

---

37. Rationalize the denominator of $\frac{6}{\sqrt{7x}}$.

$\frac{6}{\sqrt{7x}}=\square$ (Type an exact answer, using radicals as needed.)

---

38. Simplify by factoring. Assume that all expressions under radicals represent nonnegative numbers.

$$\sqrt{16x^6}$$

$\sqrt{16x^6}=\square$

---

39. Rationalize the denominator of $\sqrt{\frac{8x}{2y}}$.

$\sqrt{\frac{8x}{2y}}=\square$

---

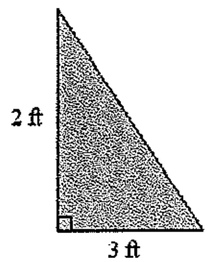
40. Solve.

$\sqrt{3x} = 9$

x = ☐ (Type an integer or a fraction. Type N if there is no real solution.)

---

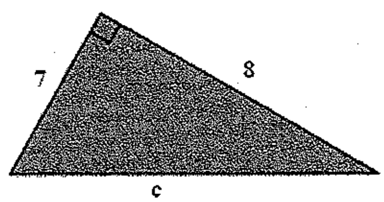
41. Find the length of the unknown side of the triangle.



The length is ☐ feet.
(Type an exact answer, using radicals as needed. Simplify your answer.)

---

42. Use the Pythagorean theorem to find the unknown side c of the right triangle.



c = ☐
(Simplify your answer. Type an exact answer using radicals as needed.)

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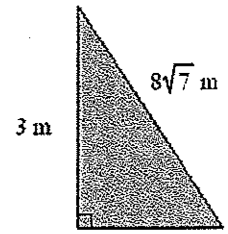
43. Find the length of the unknown side of the triangle. Give the exact length and a one-decimal-place approximation.



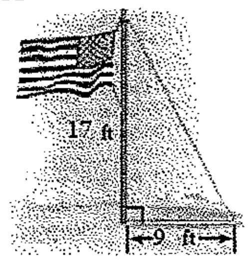
The exact length is ☐ m.
(Type an exact answer, using radicals as needed. Simplify your answer.)

The length is approximately ☐ m.
(Type an integer or a decimal. Round to one decimal place as needed.)

---

44. Solve. Give an exact answer and a two-decimal-place approximation where appropriate.

A wire is needed to support a vertical pole 17 feet high. The cable will be anchored to a stake 9 feet from the base of the pole. How much cable is needed?



The exact length is ☐ feet.
(Type an exact answer, using radicals as needed. Simplify your answer.)

The length is approximately ☐ feet.
(Type an integer or a decimal. Round to two decimal places as needed.)

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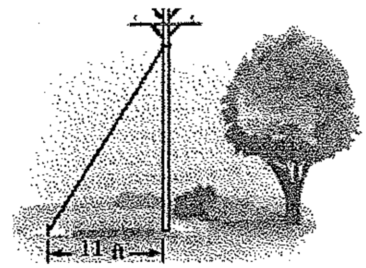
45. A wire is to be attached to support a telephone pole. Because of surrounding buildings, sidewalks, and roadways, the wire must be anchored exactly 11 feet from the base of the pole. Telephone company workers have only 30 feet of cable, and 2 feet of that must be used to attach the cable to the pole and to the stake on the ground. How high from the base of the pole can the wire be attached?



The exact height is ☐ feet.
(Type an exact answer, using radicals as needed. Simplify your answer.)

The height is approximately ☐ feet.
(Type an integer or a decimal. Round to two decimal places.)

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1. 24

2. $\frac{1}{7}$

3. 0.01

4. 18

5. $\frac{1}{4}$

6. 0.04

7. -7

8. $2x^3$

9. 4

10. $\frac{1}{9}$

11. -4

12. x^5

13. $3x$

14. $7x^4$

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15. x^3

16. $\frac{8}{3}$

17. $\sqrt{3}$

18. $\sqrt{14}$

19. $\sqrt[3]{30}$

20. $\sqrt{12x}$

21. $\sqrt{\frac{6}{xy}}$

22. $\sqrt[4]{30x^3}$

23. $\frac{\sqrt{7}}{6}$

24. $\frac{\sqrt[4]{x}}{4}$

25. $\frac{\sqrt[3]{5}}{2}$

26. $2\sqrt{10}$

27. $4\sqrt{3}$

28. $3x\sqrt{x}$

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29. $5xy^2$

30. 2

31. $\sqrt[3]{3}$

32. $16\sqrt{3} - 3\sqrt{2}$

33. $-14y^3 + 9$

34. $\sqrt{10} - \sqrt{6}$

35. $\dfrac{\sqrt{30}}{5}$

36. $\dfrac{\sqrt{5}}{5}$

37. $\dfrac{6\sqrt{7x}}{7x}$

38. $4x^3$

39. $\dfrac{2\sqrt{xy}}{y}$

40. 27

41. $\sqrt{13}$

42. $\sqrt{113}$

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43. $\sqrt{439}$
21

---

44. $\sqrt{370}$
19.24

---

45. $\sqrt{663}$
25.75

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1. Find the root. Assume that all variables represent nonnegative real numbers.

$-\sqrt[4]{16}$

The answer is $\square$.

2. Rationalize the denominator.

$\dfrac{\sqrt{10}}{\sqrt{7}}$

The answer is $\square$.

3. Simplify.

$\sqrt{9x^7}$

$\sqrt{9x^7} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

4. Use the quotient rule to divide, then simplify, if possible.

$\dfrac{\sqrt{4}}{\sqrt{2}}$

$\dfrac{\sqrt{4}}{\sqrt{2}} = \square$

(Type an exact answer, using radicals as needed. Simplify your answer.)

5. Simplify by factoring. Assume that all expressions under radicals represent nonnegative numbers.

$\sqrt{49x^6}$

$\sqrt{49x^6} = \square$

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6. Simplify.

$$\sqrt{\frac{1}{25}}$$

$\sqrt{\frac{1}{25}} = \square$

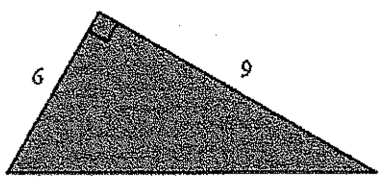
7. Simplify.

$$6\sqrt{12} + \sqrt{48} - \sqrt{8}$$

$6\sqrt{12} + \sqrt{48} - \sqrt{8} = \square$

(Type an exact answer, using radicals as needed.)

8. Use the Pythagorean theorem to find the unknown side c of the right triangle.



$c = \square$

(Simplify your answer. Type an exact answer using radicals as needed.)

9. Simplify the radical.

$$\sqrt{\frac{16}{9}}$$

The answer is $\square$.

(Simplify your answer. Type an integer or a fraction. Type N if the square root is not a real number.)

10. Find the square root.

$$\sqrt{121}$$

The square root is $\square$.

(Type N if the square root is not a real number.)

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11. Find the square root.

$$-\sqrt{36}$$

$-\sqrt{36} = \square$

(Round to the nearest thousandth as needed. Type N if the square root is not a real number.)

---

12. Rationalize the denominator of $\frac{9}{\sqrt{4x}}$.

$\frac{9}{\sqrt{4x}} = \square$ (Type an exact answer, using radicals as needed.)

---

13. Rationalize the denominator of $\sqrt{\frac{9x}{3y}}$.

$\sqrt{\frac{9x}{3y}} = \square$

---

14. Simplify by factoring.

$\sqrt{175}$

$\sqrt{175} = \square$

(Type an exact answer, using radicals as needed.)

---

15. Use the product rule for radicals to find the product.

$\sqrt{6} \cdot \sqrt{13}$

$\sqrt{6} \cdot \sqrt{13} = \square$

(Simplify your answer.)

---

16. Solve.

$$\sqrt{7x} = 14$$

$x = \square$ (Type an integer or a fraction. Type N if there is no real solution.)

---

17. Simplify.

$\sqrt{\frac{1}{6}}$

The answer is $\square$.

(Type an exact answer, using radicals as needed.)

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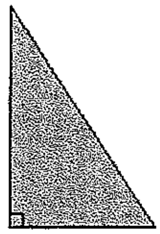
18. Find the length of the unknown side of the triangle.



The length is ☐ feet.
(Type an exact answer, using radicals as needed. Simplify your answer.)

---

19. Multiply.

$\sqrt{11}\,(\sqrt{10}-\sqrt{2})$

$\sqrt{11}\,(\sqrt{10}-\sqrt{2}) = \square$
(Simplify your answer. Type an exact answer, using radicals as needed.)

---

20. Solve.

$\sqrt{x-4} = 13$

The solution is $x = \square$.
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if the solution is not a real number.)

---

21. Use the product rule to multiply.

$\sqrt[3]{2} \cdot \sqrt[3]{5}$

$\sqrt[3]{2} \cdot \sqrt[3]{5} = \square$
(Type an exact answer, using radicals as needed. Simplify your answer.)

---

22. Use the product rule to multiply.

$\sqrt{3} \cdot \sqrt{2x}$

$\sqrt{3} \cdot \sqrt{2x} = \square$
(Type an exact answer, using radicals as needed. Simplify your answer.)

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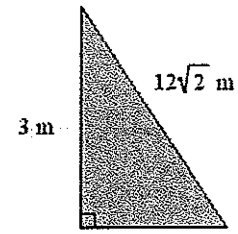
23. Find the length of the unknown side of the triangle. Give the exact length and a one-decimal-place approximation.



The exact length is $\square$ m.
(Type an exact answer, using radicals as needed. Simplify your answer.)

The length is approximately $\square$ m.
(Type an integer or a decimal. Round to one decimal place as needed.)

---

24. Simplify.

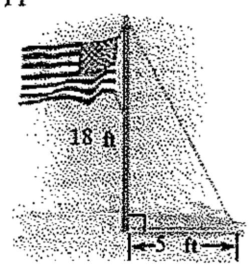
$3\sqrt{18}$

$3\sqrt{18} = \square$
(Type an exact answer, using radicals as needed. Simplify your answer.)

---

25. Solve. Give an exact answer and a two-decimal-place approximation where appropriate.

A wire is needed to support a vertical pole 18 feet high. The cable will be anchored to a stake 5 feet from the base of the pole. How much cable is needed?



The exact length is $\square$ feet.
(Type an exact answer, using radicals as needed. Simplify your answer.)

The length is approximately $\square$ feet.
(Type an integer or a decimal. Round to two decimal places as needed.)

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1. -2

2. $\dfrac{\sqrt{70}}{7}$

3. $3x^3\sqrt{x}$

4. $\sqrt{2}$

5. $7x^3$

6. $\dfrac{1}{5}$

7. $16\sqrt{3}-2\sqrt{2}$

8. $3\sqrt{13}$

9. $\dfrac{4}{3}$

10. 11

11. -6

12. $\dfrac{9\sqrt{x}}{2x}$

13. $\dfrac{\sqrt{3xy}}{y}$

14. $5\sqrt{7}$

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15. $\sqrt{78}$

16. 28

17. $\dfrac{\sqrt{6}}{6}$

18. $\sqrt{34}$

19. $\sqrt{110} - \sqrt{22}$

20. 173

21. $\sqrt[3]{10}$

22. $\sqrt{6x}$

23. $3\sqrt{31}$
16.7

24. $9\sqrt{2}$

25. $\sqrt{349}$
18.68

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

1. Use the square root property to solve.

$x^2 = 169$

$x = \square$

(Simplify your answer. Use a comma to separate answers as needed. Type N if there is no solution.)

2. Solve the equation by using the square root property. Express all radicals in simplest form.

$t^2 = 50$

$t = \square$

(Simplify your answer. Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no solution.)

3. Use the square root property to solve the equation.

$4x^2 = 12$

$x = \square$

(Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no solution.)

4. Use the square root property to solve the equation.

$(x-2)^2 = 45$

$x = \square$

(Simplify your answer. Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no solution.)

5. Use the square root property to solve the equation. Express all radicals in simplest form.

$z^2 + 9 = 0$

Choose the correct solution.

- ○ -3
- ○ 3
- ○ no real solution

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6. If a baseball is projected upward from ground level with an initial velocity of 160 feet per second, then its height is a function of time, given by $s = -16t^2 + 160t$.

What is the maximum height reached by the ball?

The maximum height reached by the ball is $\boxed{}$ feet.

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7. Find the vertex of the following quadratic function. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$f(x) = x^2 - 9x - 1$

The vertex is $\square$.
(Type an ordered pair, using integers or fractions for the coordinates.)

Determine the direction the graph opens.

○ Graph opens downward

○ Graph opens upward

Determine the y-intercept.

$(x,y) = \square$
(Type an ordered pair.)

Determine the number of x-intercepts.

○ One x-intercept

○ No x-intercepts

○ Two x-intercepts

Determine the x-intercepts. Answers are rounded to two decimal places.

○A. $(0, 4.5)$ and $(0, -21.25)$.

○B. $(-0.11, 0)$ and $(9.11, 0)$.

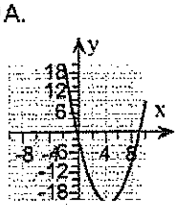
○C. None of the above.

○D. $(0, -0.11)$ and $(0, 9.11)$.

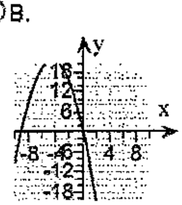
○E. $(4.5, 0)$ and $(-21.25, 0)$.

Determine which graph describes the function.

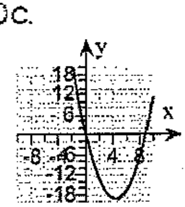
○A.



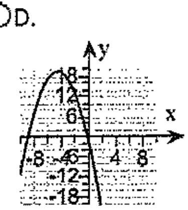
○B.



○C.



○D.



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8. Find the vertex of the following quadratic function. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$f(x) = x^2 - 8x - 9$

The vertex is $\square$.
(Type an ordered pair, using integers or fractions for the coordinates.)

Determine the direction the graph opens.

- ○ Graph opens upward
- ○ Graph opens downward

Determine the y-intercept.

$(x,y) = \square$
(Type an ordered pair.)

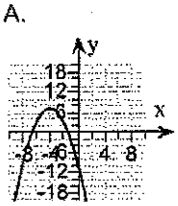
Determine the number of x-intercepts.

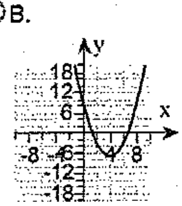
- ○ Two x-intercepts
- ○ One x-intercept
- ○ No x-intercepts

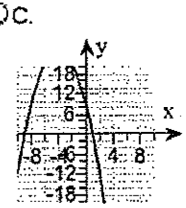
Determine the x-intercepts. Answers are rounded to two decimal places.

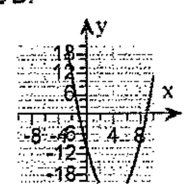
○A. (0, − 1) and (0, 9).
○B. (0, 4) and (0, − 25).
○C. None of the above.
○D. (− 1, 0) and (9, 0).
○E. (4, 0) and (− 25, 0).

Determine which graph describes the function.

○A.


○B.


○C.


○D.


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Date: ____________________
Time: ____________________

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Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Quadratic Equation and the Formula

9. Match the equation with its graph.

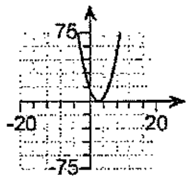
$y = 2x^2 - 12x + 17$

What is the x-coordinate of the vertex? $\square$

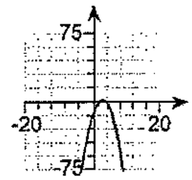
What is the y-coordinate of the vertex ? $\square$

Choose the correct graph.

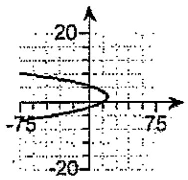
A.



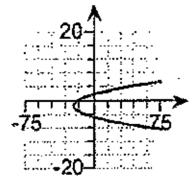
B.



C.



D.



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10. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$$f(x) = -x^2 - 2x - 9$$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

- ○ Graph opens downward
- ○ Graph opens upward

Determine the y-intercept.

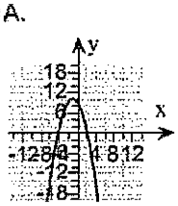
(x,y) = $\square$
(Type an ordered pair.)

Determine the number of x-intercepts.

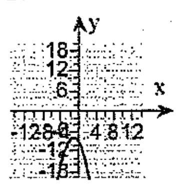
- ○ No x-intercepts
- ○ Two x-intercepts
- ○ One x-intercept

Determine which graph describes the function. Each tick marks represents two units.

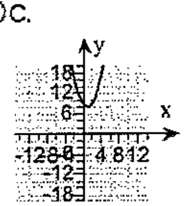
○A.



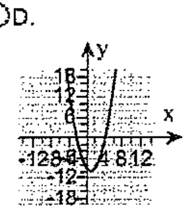
○B.



○C.



○D.



Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

11. Find the vertex of the following quadratic function. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$f(x) = x^2 + 1$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

○ Graph opens downward

○ Graph opens upward

Determine the y-intercept.

(x,y) = $\square$
(Type an ordered pair.)

Determine the number of x-intercepts.

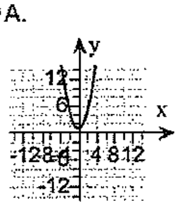
○ Two x-intercepts

○ No x-intercepts

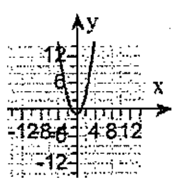
○ One x-intercept

Determine which graph describes the function. Each tick mark represents two units.

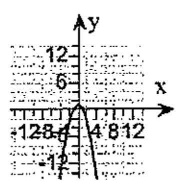
○A.



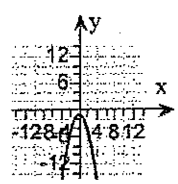
○B.



○C.



○D.



Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Quadratic Equation and the Formula
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12. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$f(x) = -3x^2 + 12x$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

○ Graph opens upward

○ Graph opens downward

Determine the y-intercept.

$(x,y) = \square$
(Type an ordered pair.)

Determine the number of x-intercepts.

○ No x-intercepts

○ One x-intercept

○ Two x-intercepts

Determine the x-intercepts.

○A. (0, 4) and (0, 0).

○B. (2, 0) and (12, 0).

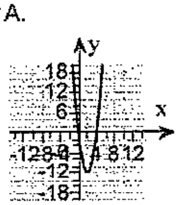
○C. (4, 0) and (0, 0).

○D. None of the above.

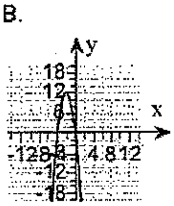
○E. (0, 2) and (0, 12).

Determine which graph describes the function.

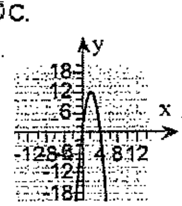
○A.



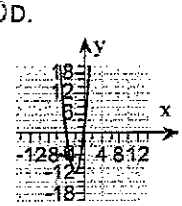
○B.



○C.



○D.



Student: ______________ **Date:** ______________ **Time:** ______________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

12.

(cont.)

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13. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$$f(x) = x^2 - 6x + 10$$

The vertex is ☐. (Type an ordered pair.)

Determine the direction the graph opens.

○ Graph opens upward

○ Graph opens downward

Determine the y-intercept.

(x,y) = ☐

(Type an ordered pair.)

Determine the number of x-intercepts.

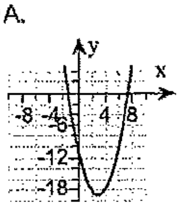
○ One x-intercept

○ Two x-intercepts

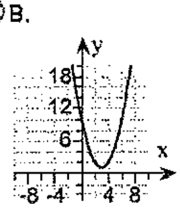
○ No x-intercepts

Determine which graph describes the function. Each tick mark represents two units.

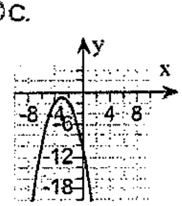
○A.



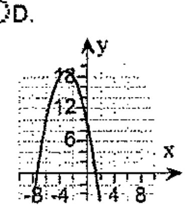
○B.



○C.



○D.



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14. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$$f(x) = -3x^2 + 6x - 8$$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

- ○ Graph opens upward
- ○ Graph opens downward

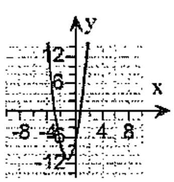
Determine the y-intercept.

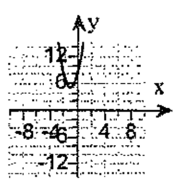
$(x,y) = \square$
(Type an ordered pair.)

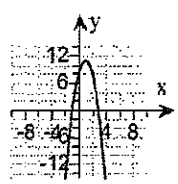
Determine the number of x-intercepts.

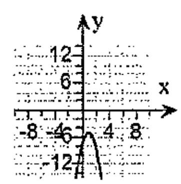
- ○ Two x-intercepts
- ○ One x-intercept
- ○ No x-intercepts

Determine which graph describes the function. Each tick mark represents two units.

○A.


○B.


○C.


○D.


Student: ____________	**Instructor:** Darlene Ford	**Assignment:** Quadratic Equation and the Formula
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15. Identify the vertex and x-intercepts of the graph of the following equation.

$$y = -x^2 + 7x + 8$$

What is the vertex? ☐
(Type an ordered pair. Use integers or fractions for any numbers in the expression.)

What are the x intercepts? ☐
(Simplify your answer. Type an ordered pair. Type an exact answer, using radicals and/or fractions as needed. Use a comma to separate answers as needed. Type N if there is no x-intercept.)

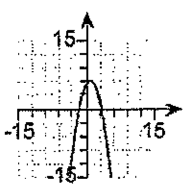
---

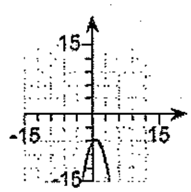
16. Find the vertex of the parabola. Sketch the graph.

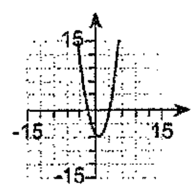
$$y = -x^2 + 2x - 7$$

The vertex is ☐.
(Type an ordered pair.)

Choose the correct graph.

○A.


○B.


○C.


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17. Identify the vertex and x-intercepts of the graph of the following equation.

$$y = x^2 + 6x - 7$$

What is the vertex? ☐
(Type an ordered pair. Use integers or fractions for any numbers in the expression.)

What are the x intercepts? ☐
(Simplify your answer. Type an ordered pair. Type an exact answer, using radicals and/or fractions as needed. Use a comma to separate answers as needed. Type N if there is no x-intercept.)

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18. Find the vertex of the graph of the following quadratic function.

$$f(x) = -3x^2 - 6x + 3$$

The vertex is $\square$.
(Type an ordered pair.)

---

19. Find the vertex of the graph of the following quadratic function.

$$f(x) = x^2 - 4x + 9$$

The vertex is $\square$.
(Type an ordered pair.)

---

20. Determine the vertex, axis of symmetry, and the graph of the quadratic function.

$$f(x) = -\frac{1}{5}x^2 + 3$$

Find the vertex of the parabola.

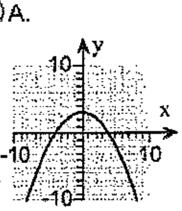
The vertex is $(\square,\square)$.

Find the equation of the axis of symmetry.

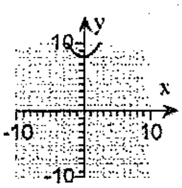
$x = \square$

Choose the correct graph of the function below.

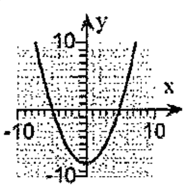
A.



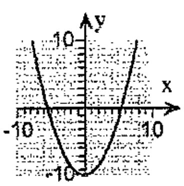
B.



C.



D.



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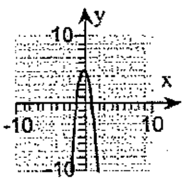
21. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

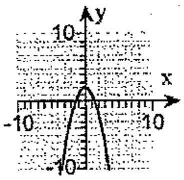
$f(x) = 3x^2 + 3$

Choose the correct graph of the function below.

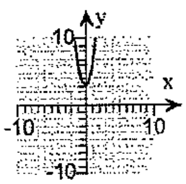
○A.



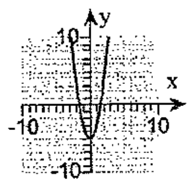
○B.



○C.



○D.



Find the vertex of the parabola.

The vertex is (☐,☐).

Find the equation of the axis of symmetry.

x = ☐

---

22. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

$f(x) = 3(x+2)^2$

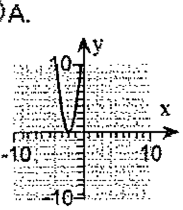
The vertex is ☐.

Find the equation of the axis of symmetry.

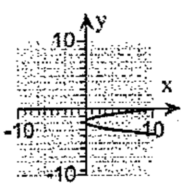
x = ☐

Choose the correct graph of the function below.

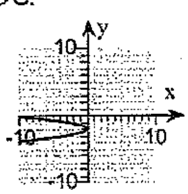
○A.



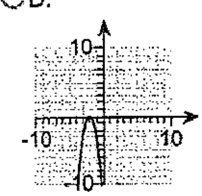
○B.



○C.



○D.

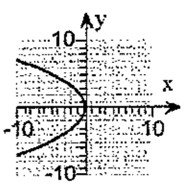


23. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

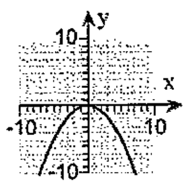
$$h(x) = \frac{1}{5}x^2$$

Choose the correct graph of the function below.

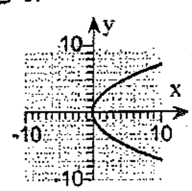
○ A.



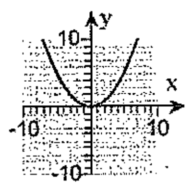
○ B.



○ C.



○ D.



Find the vertex of the parabola.

The vertex is (☐,☐).

Which line is the axis of symmetry of the parabola?

○ $y = x^2$

○ $y = x$

○ x-axis

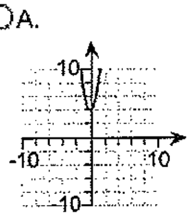
○ y-axis

24. Sketch the graph of the parabola.

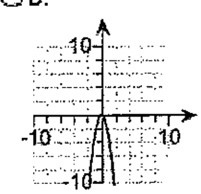
$f(x) = -3x^2$

Choose the correct graph.

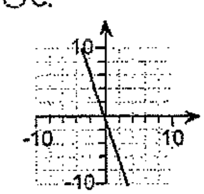
○ A.



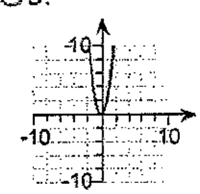
○ B.



○ C.



○ D.



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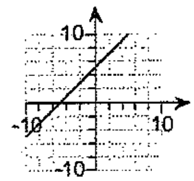
25. Sketch the graph of the parabola.

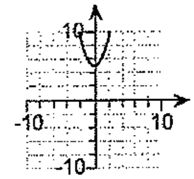
$f(x) = x^2 - 5$

Choose the correct graph.

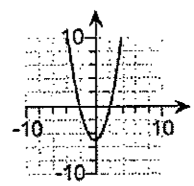
○ A.



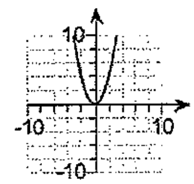
○ B.



○ C.



○ D.



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26. The product of a number and 4 less than the number is 60. Find the number.

The number is $\square$. (Use a comma to separate answers as needed.)

---

27. A father and his son can clean the house together in 3 hours. When the son works alone, it takes him an hour longer to clean than it takes his dad alone. Find how long it takes the son to clean alone.

It takes the son $\square$ hours to clean alone. (Round to the nearest tenth.)

---

28. A Chinese restaurant has a large goldfish pond. Suppose that an inlet pipe and a hose together can fill the pond in 7 hours. The inlet pipe alone can complete the job in one hour less time than the hose alone. Find the time that the hose can complete the job alone and the time that the inlet pipe can complete the job alone.

The time that the hose can complete the job alone is $\square$ hours.
(Round to the nearest tenth.)

The time that the inlet pipe can complete the job alone is $\square$ hours.
(Round to the nearest tenth.)

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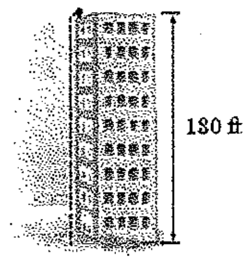
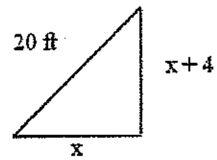
29. A ball is thrown downward from the top of a 180-foot building with an initial velocity of 28 feet per second. The height of the ball h after t seconds is given by the equation $h = -16t^2 - 28t + 180$.



How long after the ball is thrown will it strike the ground? Round the result to the nearest tenth of a second.

☐ sec

30. The Soule's live on a corner lot. Often, children cut across their lot to save walking distance. Given the diagram to the right, find how many feet of walking distance is saved by cutting across the property instead of walking around the lot.



☐ feet of walking distance is saved.

31. Use the discriminant to determine the number and type of solutions of the equation.

$4 = 7x + 2x^2$

Choose the correct answer below.

○ Two complex but not real solutions

○ Two real solutions

○ One real solution

32. Use the discriminant to determine the nature of the solutions of the equation.

$16x^2 - 40x + 25 = 0$

Choose the correct statement.

○ A. The equation has two distinct irrational solutions.

○ B. The equation has two distinct imaginary solutions.

○ C. The equation has two distinct rational solutions.

○ D. The equation has exactly one rational solution.

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33. Use the discriminant to determine the number of solutions of the quadratic equation.

$$x^2 + 4x - 6 = 0$$

The number of real solutions is $\square$.

---

34. Use the quadratic formula to solve the equation.

$$9 = -2x^2 - 5x$$

$x = \square$

(Simplify your answer, using radicals as needed. Use a comma to separate answers as needed.)

---

35. Use the quadratic formula to solve the equation.

$$(x-4)(x+2) = 2$$

$x = \square$

(Simplify your answer, using radicals as needed. Use a comma to separate answers as needed.)

---

36. Use the discriminant to determine the number of solutions of the quadratic equation.

$$x^2 - 5x + 2 = 0$$

The number of real solutions is $\square$.

---

37. Use the quadratic formula to solve the equation.

$$2x^2 - 5x = 1$$

$x = \square$

(Simplify your answer. Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no real solution.)

---

38. Use the quadratic formula to solve the equation. The equation has real number solutions.

$$-3y = 2y^2 - 2$$

$y = \square$

(Type a simplified answer, using fractions and radicals as needed. Use a comma to separate answers as needed.)

Student: __________ **Date:** __________ **Time:** __________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

39. Use the formula $A = P(1 + r)^t$ to solve the following problem.

Find the rate r at which \$300,000 grows to \$410,670 in 2 years.

The annual compound interest rate is $\boxed{}$%.
(Round to the nearest percent.)

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1. $13, -13$

2. $-5\sqrt{2}, 5\sqrt{2}$

3. $\sqrt{3}, -\sqrt{3}$

4. $2+3\sqrt{5}, 2-3\sqrt{5}$

5. the third choice

6. 400

7. $\left(\frac{9}{2}, -\frac{85}{4}\right)$
   the second choice
   $(0, -1)$
   the third choice
   B
   A

8. $(4, -25)$
   the first choice
   $(0, -9)$
   the first choice
   D
   D

9. 3
   -1
   A

10. $(-1, -8)$
    the first choice
    $(0, -9)$
    the first choice
    B

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

11. $(0,1)$
    the second choice
    $(0,1)$
    the second choice
    A

12. $(2,12)$
    the second choice
    $(0,0)$
    the third choice
    C
    C

13. $(3,1)$
    the first choice
    $(0,10)$
    the third choice
    B

14. $(1,-5)$
    the second choice
    $(0,-8)$
    the third choice
    D

15. $\left(\frac{7}{2},\frac{81}{4}\right)$
    $(8,0),(-1,0)$

16. $(1,-6)$
    B

17. $(-3,-16)$
    $(-7,0),(1,0)$

18. $(-1,6)$

19. $(2,5)$

20. 0
3
0
A

21. C
0
3
0

22. $(-2,0)$
-2
A

23. D
0
0
the fourth choice

24. B

25. C

26. $10, -6$

27. 6.5

28. 14.5
13.5

29. 2.6

30. 8

31. the second choice

32. D

Student: __________ **Date:** __________ **Time:** __________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equation and the Formula

33. 2

34. $\dfrac{-5-i\sqrt{47}}{4}, \dfrac{-5+i\sqrt{47}}{4}$

35. $1+\sqrt{11}, 1-\sqrt{11}$

36. 2

37. $\dfrac{5+\sqrt{33}}{4}, \dfrac{5-\sqrt{33}}{4}$

38. $\dfrac{1}{2}, -2$

39. 17

Student: ____________ **Date:** ____________ **Time:** ____________	**Instructor:** Darlene Ford **Course:** Algebra I Martin-Gay **Book:** Martin-Gay: Beginning & Intermediate Algebra, 3e	**Assignment:** Quadratic Equations and the Formula Quiz

1. Match the equation with its graph.

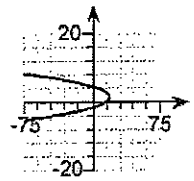
$y = 2x^2 - 12x + 15$

What is the x-coordinate of the vertex? ☐

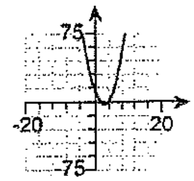
What is the y-coordinate of the vertex ? ☐

Choose the correct graph.

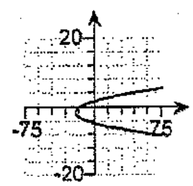
○ A.



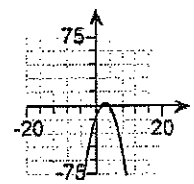
○ B.



○ C.



○ D.



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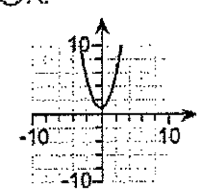
2. Identify the vertex of the graph of the quadratic function.

$f(x) = (x - 1)^2$

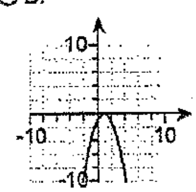
The vertex of the quadratic function is the point ☐.
(Type an ordered pair.)

Choose the correct graph.

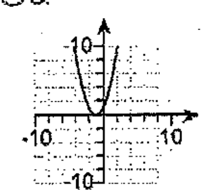
○ A.



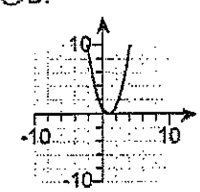
○ B.



○ C.



○ D.



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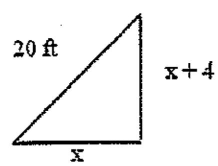
3. The Soule's live on a corner lot. Often, children cut across their lot to save walking distance. Given the diagram to the right, find how many feet of walking distance is saved by cutting across the property instead of walking around the lot.



☐ feet of walking distance is saved.

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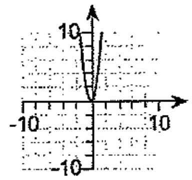
Assignment: Quadratic Equations and the Formula Quiz

4. Sketch the graph of the parabola.

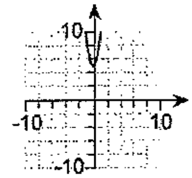
$f(x) = -4x^2$

Choose the correct graph.

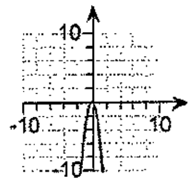
○ A.



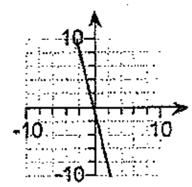
○ B.



○ C.



○ D.



---

5. Use the discriminant to determine the nature of the solutions of the equation.

$9x^2 - 12x + 4 = 0$

Choose the correct statement.

○ A. The equation has exactly one rational solution.

○ B. The equation has two distinct imaginary solutions.

○ C. The equation has two distinct irrational solutions.

○ D. The equation has two distinct rational solutions.

---

6. Use the square root property to solve the equation.

$2x^2 = 14$

$x = \square$

(Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no solution.)

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7. Identify the vertex and x-intercepts of the graph of the following equation.

$$y = -x^2 - 8x - 7$$

What is the vertex? ☐
(Type an ordered pair. Use integers or fractions for any numbers in the expression.)

What are the x intercepts? ☐
(Simplify your answer. Type an ordered pair. Type an exact answer, using radicals and/or fractions as needed. Use a comma to separate answers as needed. Type N if there is no x-intercept.)

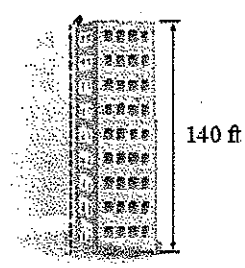
8. Solve by completing the square.

$$x^2 - 4x = -3$$

$x =$ ☐
(Simplify your answer. Type an integer or a fraction. Use a comma to separate answers as needed. Type N if there is no solution.)

9. A ball is thrown downward from the top of a 140-foot building with an initial velocity of 22 feet per second. The height of the ball h after t seconds is given by the equation $h = -16t^2 - 22t + 140$.

How long after the ball is thrown will it strike the ground? Round the result to the nearest tenth of a second.



☐ sec

10. Use the square root property to solve the equation. These equations have real-number solutions.

$$(5x - 2)^2 = 23$$

$x =$ ☐
(Simplify your answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no solution.)

11. Find the vertex of the graph of the following quadratic function.

$$f(x) = x^2 + 2x + 9$$

The vertex is $\square$.
(Type an ordered pair.)

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12. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$$f(x) = -3x^2 - 6x - 8$$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

○ Graph opens upward

○ Graph opens downward

Determine the y-intercept.

$(x,y) = \square$
(Type an ordered pair.)

Determine the number of x-intercepts.

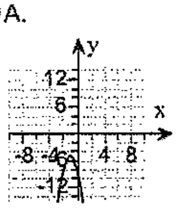
○ Two x-intercepts

○ One x-intercept

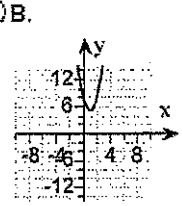
○ No x-intercepts

Determine which graph describes the function. Each tick mark represents two units.

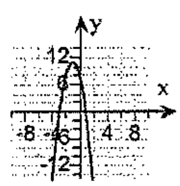
○A.



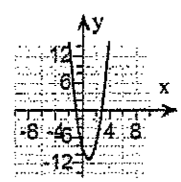
○B.



○C.



○D.



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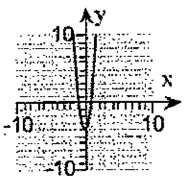
13. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

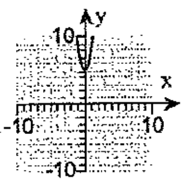
$f(x) = -3x^2 - 3$

Choose the correct graph of the function below.

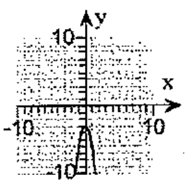
○A.



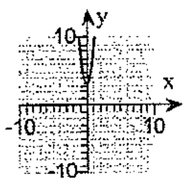
○B.



○C.



○D.



Find the vertex of the parabola.

The vertex is (☐,☐).

Find the equation of the axis of symmetry.

x = ☐

---

14. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

$f(x) = -4(x-3)^2$

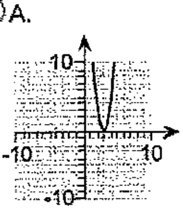
The vertex is ☐.

Find the equation of the axis of symmetry.

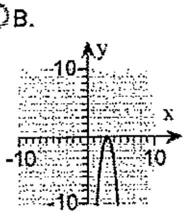
x = ☐

Choose the correct graph of the function below.

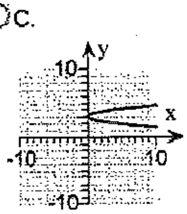
○A.



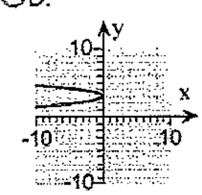
○B.



○C.



○D.



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15. If a baseball is projected upward from ground level with an initial velocity of 160 feet per second, then its height is a function of time, given by $s = -16t^2 + 160t$.

What is the maximum height reached by the ball?

The maximum height reached by the ball is $\square$ feet.

16. Use the discriminant to determine the number of solutions of the quadratic equation.

$$x^2 + 3x - 5 = 0$$

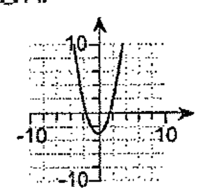
The number of real solutions is $\square$.

17. Sketch the graph of the parabola.

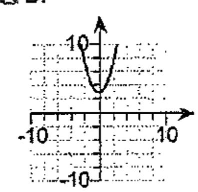
$f(x) = x^2 - 3$

Choose the correct graph.

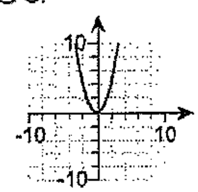
A.



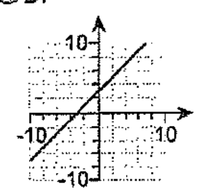
B.



C.



D.



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18. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$$f(x) = -x^2 - 2x - 6$$

The vertex is $\square$.
(Type an ordered pair.)

Determine the direction the graph opens.

- ○ Graph opens downward
- ○ Graph opens upward

Determine the y-intercept.

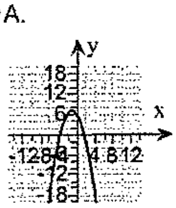
$(x,y) = \square$
(Type an ordered pair.)

Determine the number of x-intercepts.

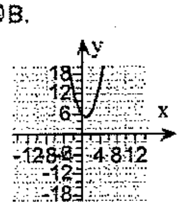
- ○ One x-intercept
- ○ Two x-intercepts
- ○ No x-intercepts

Determine which graph describes the function. Each tick marks represents two units.

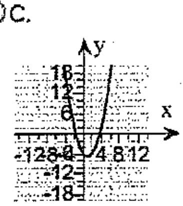
○A.



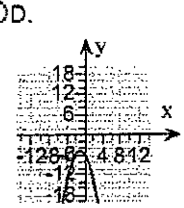
○B.



○C.



○D.



19. Use the formula $A = P(1 + r)^t$ to solve the following problem.

Find the rate r at which \$300,000 grows to \$312,120 in 2 years.

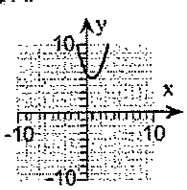
The annual compound interest rate is ☐%.
(Round to the nearest percent.)

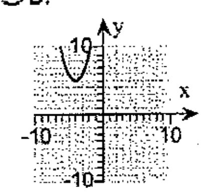
---

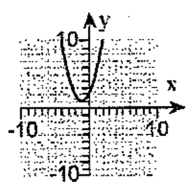
20. Determine the graph of the quadratic function, find the vertex and determine the axis of symmetry.

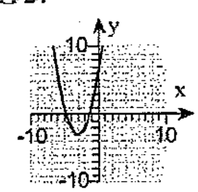
$$f(x) = (x + 3)^2 - 3$$

Choose the correct graph of the function below.

○ A.


○ B.


○ C.


○ D.


Find the vertex of the parabola.

The vertex is (☐,☐).

Find the equation of the axis of symmetry.

x = ☐

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21. Find the vertex of the following quadratic function by completing the square. Determine whether the graph opens upward or downward and find any intercepts. Also determine the graph of the function.

$f(x) = x^2 + 4x + 9$

The vertex is ☐. (Type an ordered pair.)

Determine the direction the graph opens.

○ Graph opens downward

○ Graph opens upward

Determine the y-intercept.

(x,y) = ☐

(Type an ordered pair.)

Determine the number of x-intercepts.

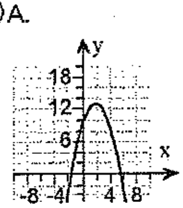
○ Two x-intercepts

○ No x-intercepts

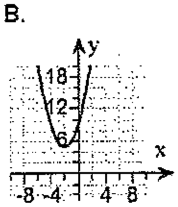
○ One x-intercept

Determine which graph describes the function. Each tick mark represents two units.

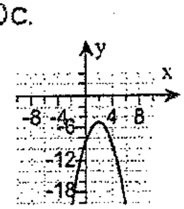
○A.



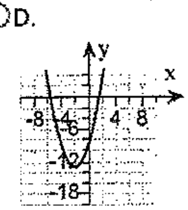
○B.



○C.



○D.



Student: ____________
Date: ____________
Time: ____________

Instructor: Darlene Ford
Course: Algebra I Martin-Gay
Book: Martin-Gay: Beginning & Intermediate Algebra, 3e

Assignment: Quadratic Equations and the Formula Quiz

22. Use the square root property to solve.

$x^2 = 64$

$x = \square$
(Simplify your answer. Use a comma to separate answers as needed. Type N if there is no solution.)

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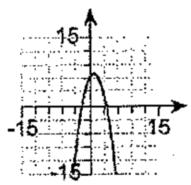
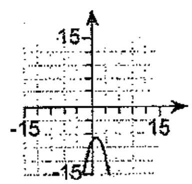
23. Find the vertex of the parabola. Sketch the graph.

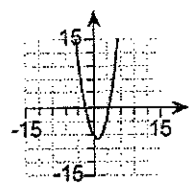
$y = -x^2 + 2x - 8$

The vertex is $\square$.
(Type an ordered pair.)

Choose the correct graph.

○A.


○B.


○C.


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24. Use the quadratic formula to solve the equation.

$2x^2 - 5x = 1$

$x = \square$
(Simplify your answer. Type an exact answer, using radicals as needed. Use a comma to separate answers as needed. Type N if there is no real solution.)

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25. Find two numbers whose difference is 56 and whose product is as small as possible.

The numbers are $\square$. (Use a comma to separate answers.)

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1. 3
   -3
   B

2. (1,0)
   D

3. 8

4. C

5. A

6. $\sqrt{7}, -\sqrt{7}$

7. $(-4,9)$
   $(-7,0),(-1,0)$

8. 1,3

9. 2.3

10. $\dfrac{2+\sqrt{23}}{5}, \dfrac{2-\sqrt{23}}{5}$

11. $(-1,8)$

12. $(-1,-5)$
    the second choice
    $(0,-8)$
    the third choice
    A

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13. C
0
-3
0

14. (3,0)
3
B

15. 400

16. 2

17. A

18. $(-1,-5)$
the first choice
$(0,-6)$
the third choice
D

19. 2

20. D
-3
-3
-3

21. $(-2,5)$
the second choice
(0,9)
the second choice
B

22. $8,-8$

23. $(1,-7)$
B

24. $\frac{5+\sqrt{33}}{4}, \frac{5-\sqrt{33}}{4}$

25. $28, -28$

VITA

Darlene Ford is a native Baton Rouge, Louisiana. Darlene has served as an educator for twenty-nine years in the East Baton Rouge Parish School System. She is a graduate of Louisiana State University in education. Darlene began her studies in the Master of Natural Sciences at Louisiana State University in June of 2007. Her interest is in helping those she teaches to demonstrate a positive attitude and confidence toward learning mathematics.