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Constancy of (Acoustic) Relative Timing Measures in the Fluent Utterances of Stutterers and Nonstutterers.

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Constancy of (acoustic) relative timing measures in the fluent utterances of stutterers and nonstutterers

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CONSTANCY OF (ACOUSTIC) RELATIVE TIMING MEASURES IN THE FLUENT UTTERANCES OF STUTTERERS AND NONSTUTTERERS

A Dissertation

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"Consider it pure joy, my brothers, whenever, you face trials of many kinds, because you know that the testing of your faith develops perseverance. Perserverance must finish its work so that you may be mature and complete, not lacking in anything."

James 1:2-4

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Abstract

Stuttering and nonstuttering children's articulatory timing abilities as measured by duration differences were compared as rate, stress and phonetic complexity were varied and both internal and external timing sources were used. Use of external timing sources resulted in within normal limit performance by the stutterers as compared to their nonstuttering peers. Significant average intrasubject variability occurred on tasks involving a variable phonetic complexity sentence and its reiterative counterpart and on a syllable expansion through clustering task. Use of internal timing sources resulted in within normal limit performance by the stutterers on both rate tasks but on only one of two stress tasks.

Significant relative timing differences between the two groups were revealed on one reiterative sentence task and on one formulation of rate task. Significant average intrasubject variability between the two groups occurred on rate tasks using both external and internal timing sources.

Results support the theory that stutterers are less skilled motorically when producing more complex utterances and exhibit disturbances in prosody. Future analyses of utterances involving extensive hierarchical changes in rate, stress and phonetic complexity are needed to reveal subtle differences between the timing abilities of stutterers and their nonstuttering peers. Stimuli should be taken from normal conversational speech in order to provide natural samples of emotional and linguistic interaction during fluent and disfluent speech production.

Introduction

The purpose of this study was to investigate the ability of stuttering children to control the relative timing of syllables as stress, rate, and phonetic complexity are varied. This ability was assessed at a motor control level using internal and external timing sources.

Previously conducted perceptual investigations indicated that stutterers' fluent utterances are distinguishably different from similar utterances produced by normals (Runyan and Adams, 1979; Wendahl and Cole, 1961). Listeners most often identified slow rate and abnormal speech cadence or rhythm as the cues which perceptually separated a stutterer's fluent speech from normally fluent speech. From a speech motor viewpoint, it has been proposed that stutterers have a reduced ability to generate a time plan useful for both perceptual processing of sequential patterns and for the regulation of motor sequences (Kent, 1984)--that is, stutterers have a temporal programming disorder. The following review of the research literature available on the temporal aspects of speech such as voice onset time, manual timing ability, reaction time,

articulatory timing in normals and stutterers led to the present investigation which seeks to measure stuttering children's motoric programming abilities. This study explored the relative timing relationships evidenced in the acoustic output of stuttering and nonstuttering children as rate, stress and phonetic complexity were varied.

Adams has completed several reviews of stuttering literature over the past eighteen years. A 1984 review of stuttering theory, research, and therapy during the previous five years clearly indicated support for both Wingate's hypothesis that stuttering occurs at points of change in prosody expressions and Adam's explanation of stuttering in terms of physiologic/aerodynamic events presumed to occur up and down the speaker's vocal tract (Adams, 1984). Research on novel events such as masking, singing, choral reading, shadowing, rhythmic speech monitoring, high and low pitched speech and oral reading to a young child showed spontaneous change by stutterers in one or all of the dimensions of vocalization related to prosody: syllable durations, fundamental frequency, and vocal sound pressure level. The physiologic/aerodynamic research on the other hand reported a failure to find a set of response patterns that characterized the stuttering of all (or even most of the stutterers tested. Stutterers A and B might have

displayed varied physiologic/aerodynamic patterns in association with their part-word repetitions, but however different these patterns might have been they both interferred with each individual's effort to quickly initiate and/or maintain phonation and integrate it with articulatory movement. The understanding of how phonation and articulation are integrated required a review of timing patterns evidenced in phonation and articulation.

Timing

Speech temporal control of children is generally more variable than that of adults. Timing ability develops through age eleven at which time children were found to be within adult levels of relative timing variance (Healey and Adams, 1981b; Tingley and Allen, 1975). The timing abilities of stutterers and non-stutterers have been evaluated and compared using various temporal features such as voice onset time, manual timing ability, voice reaction time, manual reaction time and articulatory rate, stress, and duration.

Traditional Timing Research

Voice Onset Time

Voice onset time (the time between articulatory release and vocal onset), one measure of laryngeal behavior, has been studied extensively in the normal population and has been found to require appropriate timing between the laryngeal and articulatory systems (Kent, 1976; Lisker and Abramson, 1964, 1967; Stevens and Klatt, 1974). The development of voice onset time in children's speech from a child's first words to an adultlike stability at about age eight has also been systematically and quantitatively studied (Eguchi and Hirsh, 1969; Port and Preston, 1972; Preston and Port, 1968, 1969; Preston and Yeni-Komshian, 1967; Preston, Yeni-Komshian and Stark, 1967; Zlatin, 1972). Voice onset time research on stuttering adults and children has been completed on populations from as few as five subjects to as many as twenty-three subjects and compared to matched normals with mixed and sometimes opposite results. Stutterers have been found to be either significantly slower (Agnello, 1975; Hillman and Gilbert, 1977; Agnello, Wingate, and Wendell, 1974; Starkweather and Myers, 1979) or no different than

normals in their voice onset time characteristics (Borden, Baer, and Kenney, 1985; Metz, Conture and Caruso, 1979; Watson and Alfonso, 1982).

It was difficult to compare the results due to procedural differences such as nonsense syllables versus meaningful words, isolated versus continuous speech, control of speech rate and phonetic context, subject training, use of physiologic versus perceptually fluent utterances for stutterers, use of adaptation techniques and variances in the severity of stuttering in subjects. No definitive statement could be made in reference to stutterers' voice onset capabilities, however, conclusions by the various researchers were reached. Longer voice onset time values in stutterers was believed to indicate abnormal events in the respiratory, phonatory and/or articulatory systems as well as a breakdown in the coordination of these systems (Adams, 1981).

Mixed results or lack of differences in voice onset time led researchers to look toward more controlled methods of research and to conclude that stutterers were not a homogeneous group. One type of speech behavior such as voice onset time would not separate stutterers and nonstutterers. The use of physiological data and adaptation techniques by Borden et al. (1985) was one

example of more controlled methodology which ruled out the possibility of subvocal blocks that may have clouded the data of previous studies.

Manual Timing

Manual timing abilities of stuttering children have been studied for evidence of general motor programming abilities by evaluating finger-tapping speed and accuracy, foot-tapping speed and accuracy, rate of eyebrow wrinkling, rate of jaw opening, Oseretsky Tests of Motor Proficiency scores, one-handed pursuit tasks, two-handed spool stacking, and a wide range of coordination tasks. Again, mixed results prohibited a definitive conclusion about stutterers as a group. Stutterers have been found to be either significantly different in manual timing abilities (Cooper and Allen, 1977; Seth, 1958; Snyder, 1958; West and Nusbaum, 1929; Zaleski, 1965) or no different than their fluent counterparts (Blackburn, 1931; Cross, 1936; Finkelstein and Weisberger, 1954; Kopp, 1946; Rotter, 1938; Strother and Kriegman, 1943). No definitive statement can be made in reference to stutterers' manual timing abilities. One study, however, showed trends with severe stutterers

being slower or more variable as compared to mild stutterers who in turn were slower or more variable than normals (Snyder, 1958).

Reaction Timing

Another type of sensory-motor performance task that has been often examined in adult and child stutterers is that of reaction time. Reaction times are rough analogs of the restraints underlying the control of speech production which is intrinsicly a dynamic exercise (Andrews, Craig, Feyer, Hoddinott, Howie and Neilson, 1983). Studies of both vocal reaction time and manual reaction time to either a visual or auditory stimulus have yielded mixed results.

A review by Andrews et al. (1983) gave the following summary. Ten of sixteen studies showed differences between stutterers and found stutterers to be slower than nonstutterers in auditory voice reaction time. Five of seven studies showed stutterers to be slower than nonstutterers in visual voice reaction time. Six of eight studies showed stutterers to be slower than nonstutterers in auditory manual reaction time. Insufficient evidence was reported at that time on visual manual reaction time differences between the two

groups, however, a subsequent study by Hand and Haynes (1983) showed stutterers to be significantly slower than nonstutterers in visual manual reaction time.

Andrews et al. (1983) expressed reluctance to accept reported deficits in stutterers because of three experiments in their own laboratory which did not support reaction time deficits in stutterers. Interpretation of the slower reaction time results among stutterers ranged from such explanations as learned behavior in reaction to the unpleasantness of stuttering, a neurologically based deficit, or faulty learning experience characteristic of stutterers (Adams, 1981). Abnormal laryngeal behavior at the moment of initiation of voice itself, abnormal respiratory function at the moment of initiation of voice, or an interaction of the laryngeal system with the respiratory system could be the locus of the deficit.

Subsequent studies have extended the simple reaction time paradigm and pursued the effects of pacing, masking, adaptation and more complex manual tasks on reaction times. Brayton and Conture (1978) found that stuttering was significantly reduced during noise and rhythmic stimulation and hypothesized that these reductions were directly related to temporal changes in speech production. These results and

previously reported slowness of voice initiation time led Hayden, Adams and Jordahl (1982) and Hayden, Jordahl, and Adams (1982) to study the relationship of pacing and masking to voice initiation time. They found that voice initiation time and speech initiation time were significantly reduced during pacing (rhythmic stimulation). Masking was not found to enhance voice and speech initiation times. Based on these results, the authors suggested that reduction of dysfluency during pacing resulted from the prompt initiation and maintenance of voicing in stutterers due to rhythmic stimulation which must somehow give the stutterers better timing control for speech. They hypothesized that perhaps masking neither contributed nor interferred with initiation of phonation but stuttering reduction during masking might rather be related to maintenance of vocalization.

Adaptation, decreased stuttering after repeated readings of the same material, has been frequently studied with many attempts being made to explain the basis for it (Brutten and Shoemaker, 1967; Eisenson, 1958; Wingate, 1966). Wingate (1966) suggested that repeated readings allowed the stutterer to practice production and coordination of the activities of the respiratory, phonatory, and articulatory systems which were specifically breaking down during stuttering.

Ciambrone, Adams and Berkowitz (1983) pursued this line of reasoning and investigated the correlation between improvement in controlling phonation (increased voice initiation time) and the improvement of stuttering during adaptation. Results, though weakly positive, supported the idea that there was a laryngeal component to stuttering but implied that due to the complexity of stuttering on the motor level abnormality in the respiratory, phonatory and articulatory systems and the coordination of these systems was probable. Physiological and aerodynamic factors in addition to voice initiation times were needed to explain stutterers' speech behaviors such as the adaptation affect.

Borden (1983) used a more complex manual reaction time task which more closely approximated the complexity of the speech act and thus was more definitive in comparing visual manual and oral reaction time abilities of stutterers and nonstutterers. She found that severe stutterers were significantly slower than control subjects in performing both fluent speech and fluent manual counting (silent counting on their fingers using specially designed gloves) tasks in response to a visual stimulus. Mild stutterers performed within the normal limits of the control group. Fluency of oral and manual responses of stutterers were both perceptually and

physically determined. The paradigm allowed for immediate and delayed responses. Execution time was responsible for the majority of the differences between stutterers and nonstutterers as opposed to preparation or initiation time. It appeared that some stutterers had a more generalized motor-deficit than others. Borden concluded, with caution, that three possibilities existed to explain the obtained results. Severe stutterers may have exhibited discoordination of fine motor control of both speech and hand muscles. In manual deficits, carryover effects from the speech task could have accounted for these deficits or subjects could have been silently speaking to themselves during the manual task thus essentially performing a speech task.

Articulatory Timing

The acoustic result of articulation can be examined in terms of suprasegmental features which are systematic variations of duration, intensity, fundamental frequency and the overall spectrum pattern. One basis for variation in these features is related to the speaker's timing and coordination of the articulatory system as well as its coordination with the respiratory and phonatory systems.

Ohala (1970) proposed that adults have a timing-dominant system of articulation as opposed to an articulation-dominant system of articulation. This would result in relative strict adherence to timing at the expense of meeting articulatory targets to maintain rhythm of speech. There was some evidence that temporal regularity initially predominated early speech learning and that rather than a steady progression of one type of dominance to another, temporal and articulation dominance of articulation development changed back and forth until the adult model was attained at about age eleven (Branigan, 1979; Gilbert and Purves, 1977; Hawkins, 1973; Kirk, 1973; Kubaska and Keating, 1981; Smith, 1978). Neuromotor immaturity was often given as the reason for the differences in rate and variability when comparing the child's speech to adult speech (Tingley and Allen, 1975). Because of this, children in the developmental stage sometimes had to choose whether to obey articulatory constraints or temporal constraints when attempting to approximate the adult model.

Developmentally, children have been found to be slower and more variable in the area of motor control (Hawkins, 1984). Occurrences of stereotyped behaviors, gradual maturation, over-generalization of behaviors and alternation of rapid change with quiescent phases occured during development of motor control. Of

particular interest to this study were the development of rate and stress in children as they related to the speech timing abilities from childhood through the age of attainment of the adult norm.

Starkweather (1980) made the following summary statements regarding rate and stress and their development. People generally talked at the limits of their ability as based on the homogeneity of individual syllable rates in situation, reaction time and diadokinetic rate studies. Longer utterances were produced faster whereas whispered, masking and communication failure situations produced slower rates. Development of rate and utterances in children was rapid in the early years with girls developing faster than boys. After age twenty, the rate of utterances gradually decreased. In general, stressed syllables were longer in duration and were produced with more effort. Increased rate resulted in less stress contrast. At a normal rate, more stress was placed on words that carried more information. Children initially perceived and imitated stress without using it meaningfully. At the one word stage, they often deleted the unstressed syllable of a dysyllabic word. Gradual development of stress contrast occurred as timing control of rate increased. Older children the learned the stress pattern first and after produced it. There

was a consistent tendency for girls to outperform boys in their ability to identify and produce correct stress.

In the stutterer, speaking in time to rhythmic movement immediately reduced stuttering fifty to eighty percent of the time (Andrews et al, 1982; Barber, 1939; Johnson and Rosen, 1937). Therefore, studies on rate and rhythm of voluntary articulatory movements in stutterers have been pursued and yielded mixed results. Stutterers' abilities to produce rapid speech muscle movements (diadochokinesis) and rhythmic speech movements (rhythmokinesis) were not found to be significantly different from nonstutterers 1940; Strother and Kriegman, 1943). However, other investigators did find significant differences in abilities between stutterers and non-stutterers on these tasks (Blackburn, 1931; Hunsley, 1937; Rickenberg, 1956; Seth, 1934). DiSimoni (1974) found that adult stutterers showed more variability than normals in consonant and vowel durations. In addition, Cooper and Allen (1977) found stutterers in general to be less accurate timers than a control group during both speech and nonspeech activities. Of particular interest to the internal timing abilities of the stutterer was the study by Zaleski (1965) which revealed stuttering children's inability to maintain a prior metronomic stimulus as well as their fluent counterparts. A more recent study

by Riley and Riley (1980) indicated that not all children between the ages of five and twelve who stutter experienced oral motor deficits.

Slowing rate in stutterers was a special condition which reduced or eliminated stuttering (Andrews et al, 1982). Rate decrease has often been used in therapy both because of its affect as noted above and because rapid rate was often a characteristic noted in stutterers. Stutterers were slower readers and were observed to have a mean reading rate of one hundred twenty-three words per minute as compared to one hundred sixty-seven words per minute for nonstutterers. This was expected due to the amount of time dysfluent utterances required for production (Bloodstein, 1944; Johnson, 1961). Experimental manipulation of reading rates yielded less stuttering at slower rates (Adams, Lewis, and Besozzi, 1973). Manipulation of rate has also been used successfully with stuttering children (Curlee and Perkins, 1984; Freeman, 1982; Ryan, 1977; Shames and Florence, 1980; Webster, 1975). A widely accepted fact which had no experimental confirmation was that children reproduced speech rate in response to the adult model (Cross, 1977; and Newport, 1976). Mothers of young stuttering children have been found to be habitual fast talkers, a fact which was often viewed as a factor in maintaining a child's stuttering problem

(Meyers, 1983; Starkweather, 1982). These mothers were counseled to model a slower rate in order to manipulate their child's rate of speech. Children have been found to be more fluent during slower speech. This fluent speech has been found to be significantly slower than nonstutterers' fluent speech (Costello, 1983). In addition, fluent utterances of stuttering children were usually less than ten syllables (mean length of utterance) and their perceptually fluent longer utterances were characterized by a rate slower than their shorter utterances. Healey and Adams (1981a) found that children produced these rate reductions by both prolonging the duration of phonetic units and by pausing between words.

A study by Healey and Adams (1981b) involved both stuttering children and adults and their fluent counterparts. Their task was to repeat each of two test sentences ten times each at a basal rate and then at a rate they considered to be one-half their basal rates. In comparison to previously reviewed research, this task was considered to be less motorically complex by the authors. Results showed that stutterers had significantly longer vowel and consonant durations than nonstutterers on sentences one and two consecutively. Children showed significantly longer vowel and utterance durations than did adults on sentence two. There were

no statistically significant interaction effects thereby no differences between or within any of the four groups. The authors concluded that the more complex the speech act, the more likely differences would occur. Manipulation of stress in addition to rate would produce more complex speech.

Stress in stuttering has long been a topic of study. Three major findings reported by Brown in a series of studies between 1935 and 1945 were evidence that stuttering occurred more frequently on certain grammatical classes (content words), on the early words of a sentence (namely the first three words) and on longer words. Wingate (1976, 1978) reviewed Brown's research and found that in addition to the above findings, word stress was highly associated with stuttering occurrence. Brown, however, did not report this as a significant finding. Wingate (1979) subsequently designed a passage (Ship passage) which put "function" words in the first three positions in sentences. The results of this study showed that early sentence position and grammatical class were not separate factors. Wingate identified linguistic stress as the common factor which explained stuttering on content words and early sentence position words. Primary stress (or at least secondary stress) occurred on content words and stress regularly occurred on the

early portion of sentences and at the beginning of clauses within sentences. These comments were made in reference to the English language.

Wingate (1984) noted that studies reporting more stuttering on stressed than unstressed syllables had determined stress loci intuitively. In order to substantiate these date, Wingate designed a method to objectively identify stress loci. Thirty-five male stutterers (ages fourteen to twenty six) were recorded as they read the "Ship passage." The "best normal" male speaker recorded sample (chosen from a group of ten "normal" male speaker recorded samples) of the "Ship passage" was input to a graphic level recorder which gave a permanent intensity-by-time visual representation of this "reference sample." A comparison graph was then made comparing freqvency of stuttered words to stress loci. Results showed a clear correspondence between stutter events and stress peaks.

Weiner (1984) however, presented data which compared production of sixteen bisyllabic words which could be produced with primary stress on either the first or second syllable. Results revealed stuttering occurred about the same percentage of time on both stressed and unstressed initial syllables (about 40 to 50 percent) with only nine occurrences of stuttering on the second syllable. Weiner interpreted these

observations to be supportive of the theory that the loci of stuttering are strongly associated with initiation of phonation. Stutterers appeared to have about equal difficulty initiating phonation on both stressed and unstressed syllables.

Summary of Traditional Timing Research

Children gradually develop the timing abilities of adults in relation to both speech and manual tasks. Stutterers have been found to be variable as a group in their abilities regarding voice onset time, manual timing abilities, reaction time, and articulatory timing abilities such as rate, stress and maintenance of rhythmic patterns. No homogeneic factor regarding timing ability in stutterers has yet been found which can be significantly accorded to all stutterers.

Relative Timing

Phoneticians have formulated rules regarding prosodic effects on consonants and vowels which essentially express the fact that the greater the number of subunits in a larger unit, the shorter is each subunit up to a limit of compressibility (Pickett, 1980). Two basic explanations of how this acoustic

segment duration change occurred during rate and stress variations likeable to those during conversational speech have been posed. One theoretical viewpoint suggested that segmental articulation movements were overlapped in time during rapidly spoken or unstressed syllables and thus a shorter acoustic result was produced as compared to the same syllable spoken more slowly with greater stress (Kozhevnikov and Chistovich, 1965; Lindblom, 1963; Shaffer, 1976). An alternative explanation purported that relative timing of the movement of the articulators remained constant as did the resulting acoustic durations when rate and stress were varied even when the absolute duration or extent of movement of the articulators changed (Kent and Moll, 1975; Kent and Netsell, 1971; Lofqvist and Yoshioka, 1981; Tuller, Kelso, and Harris, 1982).

Lashley (1951) proposed that rhythmic action and hiearchical motor organization were highly related. Martin (1972) proposed a model concerning the rhythmic structure of speech based on this proposal and defined rhythm as temporal patterning. A basic premise of motor functioning is that natural movement sequences are subject to constraints such as inertia. The consequences of such constraints in speech are seen without doubt at the acoustic signal level and probably should be expected to affect some aspect of the

morphology of language at the syllable level. Martin theorized that these constraints on speech sounds resulted in the theory of relative timing where the locus of each sound element in a sequence is determined in relationship to all other sound elements both adjacent and nonadjacent. Therefore, the duration of each sound element is also in relationship to all other sound elements in the sequence.

Rhythm patterns in speech are defined by Martin as event sequences which are marked (accented) or unmarked (unaccented). The accents recur with essential regularity despite tempo. They are assumed usually to consist of up to seven syllables or so and thus a prosodic unit corresponding to breath groups (Lieberman, 1967) or syntagm (Kozhevnikov & Chistovich, 1965). These accents recur with essential regularity despite tempo (fast, slow) or changes in tempo within a sequence (accelerate, retard). The simplest rhythmic pattern would be a sequence with one accented and one unaccented element. Subsequent patterns would then be hierarchically organized (pattern within a pattern).

Observation and measurement of appropriate external parameters have often been used in research to understand how the central nervous system organized and controlled motor behavior (Engberg and Lundberg, 1966; Grillner, 1975; Lacquaniti and Soechting, 1982;

Lacquaniti, Soechting, and Terzuolo, 1982; Shaffer, 1982; Shik and Orlovskii, 1976; Terzuolo and Viviani, 1979). These investigators have shown that in various nonspeech motor skills such as bimanual coordination, handwriting, typewriting, postural control and locomotion, the relative timing of kinematic or electromyographic occurrences was preserved across graduated changes in rate and force production (Tuller and Kelso, 1984). In other words, the relative timing of events was a constant characteristic of motor behavior, in spite of broad differences in the specific duration of an action sequence (Weismer and Fennell, 1985). Since speech production was a highly regarded example of coordinated motor behavior, it was logical, therefore, to pursue the notion of relative timing in speech production. The speech literature also revealed some support for pursuing the idea of relative timing of speech production. Perception of medial stop consonants was very much influenced by the duration of silence prior to consonantal release with the duration of silence necessary to identify the medial stop consonant as voiceless decreasing as speaking rate increased (Port, 1979).

Specific studies on speech production have shown that the relative timing of the kinematics of articulation at the segmental and syllabic levels was unchanged by suprasegmental variations (Kent and Moll, 1975; Kent and Netsell, 1971; Kozkevnikov and Chistovich, 1965; Lofqvist and Yoshioka, 1981; Ostry, Keller, and Parush, 1983; Tuller and Kelso, 1984).

Tuller and Kelso (1984) examined the upper lip, lower lip, jaw, and nose movement relationships of three adult females and one adult male as they produced nonsense syllables with the stress patterns embedded in a carrier phrase. The timing of movement onset for articulating gestures appropriate to consonants was closely associated with the timing of movement onsets for vowel-related articulatory gestures. This stability of relative articulatory timing was independent of often large variations in duration, displacement, and velocity of individual articulators.

A similar finding regarding relative timing was identified through electromyographic study of speech muscle activity corresponding to the interval between successive vowels and successive consonants spoken by three adult females (Tuller, Kelso and Harris, 1982). Electromyographic activity was recorded from muscles known to be associated with the vowels and consonants of

the utterance under investigation (e.g., "It's a / 'pee peep / again." or "It's a / pee 'peep / again."). The time interval between the onset of electromyographic activity for V1 and C2 in a / C1 V1 C2 V2 C3 / nonsense syllable utterance was a constant fraction of the V1 V2 electromyographic onset interval for all stress patterns and speaking rates tested.

A comparatively easier and less invasive technique to measure relational invariance in speech would be measurement of acoustic events. Although considered an indirect measure concerning the organization of motor control (Cooper, 1983), there have been acoustic studies indicating near constant ratios across changes in speaking tempo in children and adults (Smith, Sugarman and Long, 1983; Weismer and Fennell, 1985).

Smith et al. (1983) proposed the possibility that increased variability in children's rate as compared to adult rate might be related simply to slower speaking rate (hence longer segments) rather than neuromotor immaturity. Three groups of children, ages 5.7, 7.0 and 9.1 years old, produced "My puppy ate the cookie today." ten times at three speaking rates. Wide band spectrograph analysis showed that on the average, syllable and phrase level measures increased by 17.3% when comparing normal with fast rate and decreased by

16.5% from normal to slow. All twenty subjects showed smaller mean duration values for fast versus normal speaking rate. Eighteen of the twenty subjects showed appropriate mean duration relationships for the normal versus slow rate condition. In addition, duration of two individual syllable measures (intervals) were compared to phrase duration at each speaking rate for each age group. This provided a measure of the proportion of the total phrase occupied by each syllable at each speaking rate for each age group. In each of the three rate conditions, the two syllable measures each constituted 18%-19% of the total phrase duration for each of the age groups. This suggested that the subjects employed relative durational relationships in the fast and slow rates as compared to their normal rates.

Weismer and Fennell (1985) varied the rate and stress of phrase-level utterances spoken by adult normals and neurogenically speech disordered patients and studied the acoustic records. Data set I, obtained from three normal speakers, consisted of duration measurements of seven intervals with the same left-hand boundaries (burst associated with initial /b/ in Bob) and right-hand boundaries at onset and offset point to VC and CV interfaces in the utterance "Bob hit the big

dog." Each subject spoke the sentence twenty times at conversational and fast rates with stress on each content word and a neutral stress condition (20 x 3 subjects x 2 rates x 5 stress patterns). Data set II involved six neurogenic patients and four normals (2 adults and 2 geriatrics). Subjects repeated sixteen sentences five times each at conversational and fast rates. A modified protocol was used with two apraxic patients and only fluent utterances (as defined by the author) were studied. Three different interval types were evaluated: 1) intervals that shared a common left-hand boundary; 2) intervals overlapped but with no common measurement points; and 3) intervals with no overlap and no common measurement points. The results extended the temporal constancies noted in EMG and kinematic signals reported above to the speech acoustic signal domain. Unexpectedly, the stable relative timing across changes in speaking rate included the neurogenic speech disordered people as well as the normal subjects. Neurogenic speech disordered subjects were chosen for the study because they are typically associated with timing abnormalities at the segment, word and phrase level (Kent and Rosenbek, 1982; Lehiste, 1965; and Weismer, 1984a, 1984b). Another such group associated with these same timing abnormalities were stutterers.

Untrained listeners can identify stutterers because they hear a slower rate and abnormal cadence. Both of these can be defined as timing differences. Stress points (accent) are where stutterers break down. They can produce stress but their timing is off (they are dysfluent). As a group, stutterers tend to speak more quickly than normals and they tend to stutterer less when they speak more slowly. The following sequence of tasks has been been designed to test the timing abilities of stuttering and nonstuttering children in accordance with the precepts laid out in Martin's model. Tasks explore general overall timing and rate abilities, timing ability to produce different stress patterns with and without phonetic complication, and intra-syllable timing abilities.

Do stuttering children control stressed syllable durations of increasing phonetic complexity in a manner similar to their normal peers in response to a fast or slow metronome beat?

Do stuttering children control stressed and unstressed syllable durations in a manner similar to their normal peers in response to a nonsense syllable train?

Do stuttering children control intra-syllable durations in a manner similar to their normal peers in response to expansion due to clusters and suffixes?

Do stuttering children control stressed and unstressed syllable durations in a manner similar to their normal peers in response to a sentence with variable phonetic patterns?

Do stuttering children control stressed and unstressed syllable durations in a manner similar to their normal peers in response to a reiterative speech pattern of the above described sentence?

Do stuttering children control stressed and unstressed syllable durations in a manner similar to their normal peers in production of a sentence in which specific questions would require shifts in emphatic stress?

Method

Stuttering and nonstuttering children's articulatory timing abilities were compared in three types of speaking tasks. The first set of tasks involved exploration of general overall timing and rate abilities through generation of nonsense syllable trains in response to a 60 beat/minute metronome pace and an 80 beat/minute metronome pace. This portion of the task was intended to assess a relatively low-level auditory to motor planning ability. Phonetic complexity was added by parametrically elaborating syllabic structure through use of similar trains of words in response to a 60 beat/minute metronome pace. The second set of tasks involved the timing of different stress patterns. Task one was repetition of a nonsense syllable train. This task was intended to assess a relatively low-level, auditory to motor planning ability. The second task added a layer of difficulty in motor planning in that the child had to formulate sentential stress patterns appropriate to answer a particular question. In order to add a degree of difficulty, the equi-stress task was performed at a rapid rate as well as a normal rate. The task was performed with three stress patterns - an equi-stressed pattern, a

stressed-unstressed pattern and an unstressed-stressed pattern. Task three involved repetition of three sentences with variable phonetic patterns, a motor task with phonetic complexity. Task four removed the linguistic overlay of task three and involved repetition of reiterative speech patterns of the above mentioned sentences.

The third set of tasks explored intra-syllable timing abilities of the two groups. Repetitions of words immersed in a carrier phrase were produced in order that evaluation of syllable expansion due to clusters and suffixes could be completed.

Measurements were made regarding the duration of various segments of the utterances. Comparisons were made across groups to show degree of timing control in terms of intra-subject variability.

Subjects

Subjects were twenty 10-16 year old male children. This age range was chosen to represent the time at which normal children typically achieve adult-like speech timing control (Kent, 1976). Ten of the children were initially identified as stutterers by a certified speech/language pathologist from their schools on the basis of dysfluent speech characterized by

interjections, part-word, word and phrase repetitions, revisions, incomplete phrases, broken words, or prolonged sounds. Subsequent analysis of a spontaneous speech sample by the experimenter yielded 1-12 percent syllables stuttered (mean = 5 percent) or presence of tension-struggle or prolongation duration scores of 1/2 second or 1-5 percent postponement-avoidance behavior (Van Riper, 1971, p. 225). These children were tested and evidenced normal articulation as determined by a phonetic analysis of their spontaneous speech and normal language as determined by evaluation of a ten minute language sample (Damico and Oller, 1984). Each subject also passed a pure-tone hearing screening level of 25dB HTL (re: ANSI, 1969) for the frequencies 500, 1000, 2000 and 4000 Hz. Furthermore, stutterers were screened to insure that they were not participating in any type of alteration of timing therapy such as prolonged speech. The other ten children were a group of normals matched for age and sex to the first group. They evidenced no articulation, language, hearing, or fluency problems in accordance with the criteria described for the ten stuttering subjects. Specifically, dysfluency was less than one percent with no tension-struggle, a

prolongation duration score of less than 1/2 second and no postponement-avoidance.

Instrumentation

Recordings from each subject were made using a Sony WM-D6C stereo cassette recorder in a room having low ambient noise levels. A Sony EMC-150 electret condensor microphone was positioned six inches in front and slightly above the child's mouth. A manually set portable audio metronone was used to set the pace in the first set of speaking tasks. Single sitting recording sessions were individualized. Duration measurements of designated intervals were derived through use of the Micro-Speech Lab, a speech signal analysis package designed for processing, measuring and displaying speech signals. It operated in the environment of a Zenith 148 microcomputer.

Nonsense Syllable Trains

The nonsense syllable trains for the first set of speaking tasks consisted of each subject's ten fluent repetitions of /ba ba ba ba ba ba ba/ in response to a 60 beat/minute metronome pace and an 80 beat/minute metronome pace.

The nonsense syllable trains for the second set of speaking tasks were made up of an adult male speaker's productions of a stressed syllable, /ba/. This syllable was 300 msec. in duration. An unstressed version of this syllable was created by deleting a 100 msec. section of the vowel steady state. Thus, the unstressed syllable was 2/3 of the duration of the stressed syllable.

Three nonsense syllable trains were then created. An isochronous train, /'ba 'ba 'ba/, was created by repeating the stressed syllable three times. The duration from onset of one /b/ segment to the next was set at 500 msec. Thus, the /b/ bursts of this syllable train occurred at 0, 500, and 1000 msec.

The second syllable train included the stressed syllable followed by two unstressed syllables, that is, /'ba ba ba/. The /b/ bursts occurred at relative times 0, 500, and 833 msec.

A third syllable train included an unstressed syllable followed by a stressed syllable followed by an unstressed syllable, that is, /ba 'ba ba/. The /b/ bursts occurred at relative times 0, 333, and 833 msec.

The final syllable train was intended as the fast speed train. It consisted of three repetitions of the unstressed syllable. Onsets for /b/ were at 0, 333, and 666 msec.

These data were taken from the output of the computer and recorded on cassette for use in the field. Stimuli were presented freefield using a Sony WM-D6C stereo cassette recorder. Subject responses were recorded by the researcher on a second Sony WM-D6C stereo cassette recorder.

<u>Word Stimuli</u>

Word trains for the first set of speaking tasks consisted of words showing a gradual increase in phonetic complexity and were similar to the nonsense syllable trains. They were as follows: /bæd bæd bæd bæd bæd bæd bæd/, /bræd bræd bræd bræd bræd bræd bræd/ and /bæd bræd bæd bræd bæd bræd bæd/. Each subject produced ten fluent sets of each train in response to a 60 beat/minute metronome pace.

The third set of speaking tasks involved words with clusters and suffixes. Cluster productions consisted of (I sit again), (I spit again) and (I split again). Suffix patterns were (Say stick again), (Say sticky again), (Say stickily again), (Say tick again), (Say ticker again), (Say tickertape again), (Say con again), (Say constitute again), (Say constitution again), and (Say constitutionality again). Each subject produced ten fluent repetitions of carrier phrase plus word in

response to a previously recorded Language Master production of these phrases.

Sentential Stimuli

The second task of the second set of speaking tasks involved formulation of sentence stress. The intent of the sentential stimuli was to cue the subjects to produce a standard sentence Bob beat Bill again. with three stress pattern. The neutral pattern containing no emphatic stress was cued by the question "What happened?" and was presented at a fast and slow rate. The question "Did Bill beat Bob?" was intended to evoke emphatic stress upon Bob. Thus, the stress pattern should be similar to the /'ba ba ba/ syllable train. The question "Did Bob lose?" was intended to produce emphatic stress upon the verb, that is, Bob beat Bill. This pattern is similar to the /ba 'ba ba/ syllable train. These questions were recorded by an adult female speaker on a Language Master. Subject responses were recorded by the researcher on a Sony WM-D6C stereo cassette recorder.

The third task of the second set of speaking tasks consisted of three sentences with variable linguistic patterns. Accent levels noted are in accordance with Martin's model.

Bob and	Becky ate	peanut butter.
2	3	1
Barry and	Christopher bought	candy.
2	3	1
Christopher can	dunk the	basketball.
2	3	1

The fourth task of the second set of speaking tasks consisted of three reiterative sentences patterned after the above sentences as follows:

ba ba	baba ba	babababa
2	3	1
baba ba	bababa ba	baba
2	3	1
bababa ba	ba ba	bababa
2	3	1

Procedures

General timing and rate ability tasks, timing ability to produce different stress patterns with and without phonetic complexity complication tasks, and intra-syllable timing ability tasks results were obtained from each subject in a randomized order. There was a minimum of one training trial.

Subjects produced the /ba/ (60 beats/minute) and /ba/ (80 beats/minute) syllable trains and the /bæd/, /bræd/ and /bæd bræd/ syllable trains until ten fluent productions of each task were obtained. Utterances were collected in a randomized order.

Subjects imitated the digitized live voice utterance /'ba 'ba 'ba/, a motor task, ten times each when presented at two rates and under three stress conditions. The slow rate and neutral stress utterance were one and the same. Utterances were presented in a randomized order.

Subjects produced the utterance (Bob beat Bill again.), a complex motor task, ten times each at two rates and under three stress conditions when presented questions previously recorded on a Language Master.

Half of the subjects performed the stressed-unstressed and unstressed-stressed tasks first. Half of the subjects performed the equi-stress rate

tasks first. Subjects were given practice to insure their use of appropriate stress on the linguistic task. Questions were presented in a randomized order until ten fluent productions of each rate and stress conditions were obtained. The subject responses were recorded on the previously mentioned Sony cassette recorder.

Subjects imitated the variable phonetic complexity sentences presented via the Language Master until ten fluent productions were obtained. Each sentence task was followed by the matching reiterative speech pattern task. Sentences were presented in a randomized order to each subject.

Subjects imitated the cluster and suffix phrases presented via the Language Master until ten fluent productions of each pattern were obtained. Half of the subjects performed the cluster patterns first. Half of the subjects performed the suffix patterns first. The suffix patterns were presented in a randomized order to each subject.

Data Analysis

All measurements were made by the researcher through use of the Micro-Speech Lab, a speech and signal analysis package designed for processing, measuring and displaying speech signals.

Data points for the first set of tasks were taken at the bursts associated with the /b/ in /ba/, /bæd/,/bræd/, and /bæd bræd/. Six data points per repetition were used to form five duration measures for each task. Group means and standard deviations were derived using a t-test for independent means.

Data points for the first and second tasks of the second set of tasks were taken at the bursts associated with the [b] in the digitized live voice syllable trains and the formulated stress pattern sentences. Three data points per repetition were used to form two duration measures for each task. Group means and standard deviations were derived using a t-test for independent means. In addition, ratios were established using intervals similar to those described in Weismer and Fennell (1985) and previously reviewed in the Introduction. Group comparisons were made in each speaking condition for (1) the average of each subject's ratio and (2) the standard deviation of each subject. Average ratios indicated if the timing strategies of subject groups were similar. Intra-subject standard deviations showed variability of motor coordination patterns within each subject over repetition of a task. Interval one left-hand boundaries were the burst associated with the initial /b/ in /ba/ (syllable one) and (Bob) and the right-hand boundaries were the burst

associated with the initial /b/ in /ba/ (syllable two) and (beat). Interval two left-hand boundaries were the interval one right-hand boundaries and the right hand boundaries were the initial /b/ in /ba/ (syllable three) and (Bill).

ba ba ba Bob beat Bill.

1 2 1 2

These measurement intervals were used to form ratios that could be compared across speaking rate and stress conditions to test the hypothesis of relative timing stability. Interval one would be near equal to interval two in both the normal and fast rate conditions of /ba ba ba/ and (Bob beat Bill.) when equal stress was placed on all syllables. This should produce ratios of near 1.0. Interval one, when stressed, would be longer than interval two and interval two, when stressed, would be longer than interval one. Thus, the ratio of interval one/interval two should be greater than 1.0 in the stressed-unstressed patterns and they should be fractional in the unstressed-stressed condition.

Data points for the third and fourth tasks in the second set of tasks were taken at stress points and were the burst associated with the various stops in the variable phonetic complexity patterns and reiterative

speech patterns. Three data points per repetition were used to form two duration measures for each task. Group means and standard deviations were derived using a t-test for independent means. As in tasks one and two, the two duration measures were used to form ratios that could be compared across variable phonetic complexity patterns and reiterative speech patterns to test the hypothesis of relative timing stability with and without linguistic complication.

Data points for the cluster patterns in the third set of speech tasks delineated the [s] duration which began with the end of periodicity of the preceding vowel in (I) and ended with the beginning of periodicity of the /I/ in /sIt/ or with the closure for [p] in /spIt/ and /splIt/. Data points for the suffix patterns were taken by measuring the duration of the base word in each set. /StIck/ was delineated from the end of periodicity of the vowel in (Say) to the end of periodicity in the vowel /I/. /TIck/ was delineated from the burst of the /t/ to the end of periodicity in the vowel /I/. /Kan/ was delineated from the burst of the [k] to the end of periodicity of the /n/. Two data points per repetition were used to form one duration measure for each task.

Group means and standard deviations were derived using a t-test for independent means.

RESULTS

The results of this study of stuttering and nonstuttering children's articulatory timing abilities are reported as follows: 1) the ability to control stressed syllable durations of increasing phonetic complexity while matching an isochronous slow or fast metronome beat (Metronome Rhythmicity); 2) the ability to imitate nonsense syllable durations as rate and stress were varied (Digitized Live Voice); 3) the ability to imitate words expanded through clustering or suffixing (Intra-syllable Timing Patterns); 4) the ability to imitate three sentences with variable phonetic complexity and their reiterative counterparts (Variable Phonetic Complexity); and 5) the ability to produce sentences in which specific questions required a slow or fast rate response or shifts of emphatic stress (Formulation of Rate and Emphatic Stress). The subject groups' average for each time segment of the various tasks are shown in Figures 1 - 23. Average intrasubject standard deviations for each subject group and time segment appear in table form.

Relative timing ability was measured by ratio mean scores and ratio standard deviation scores for digitized live voice tasks, variable phonetic complexity tasks, and formulation of rate and emphatic stress tasks.

Stuttering subjects sometimes attempted to perform a task as many as twenty-six times to attain ten or less fluent productions. Most subjects required ten to thirteen attempts to attain ten fluent productions. Some subjects were unable to perform some of the tasks satisfactorily (See Appendix A - Raw Data).

<u>Metronome Rhythmicity</u>

The hypothesis tested here was whether stuttering children controlled the relative timing of syllables in a manner similar to their normal peers. Stuttering children were compared to nonstuttering peers in their ability to control stressed syllable durations of increasing phonetic complexity while matching an isochronous metronome beat at fast and slow rates. Each group produced ten repetitions each of the syllable train /ba ba ba ba ba ba ba/ isochronously with a metronome set at 60 beats/minute and 80 beats/minute. In addition they produced the phonetically more complex syllable trains /bæd bæd bæd bæd bæd bæd bæd/, /bræd bræd bræd bræd bræd bræd bræd/, and /bæd bræd bæd bræd bæd bræd bæd/ isochronously with a metronome set at 60 beats/minute.

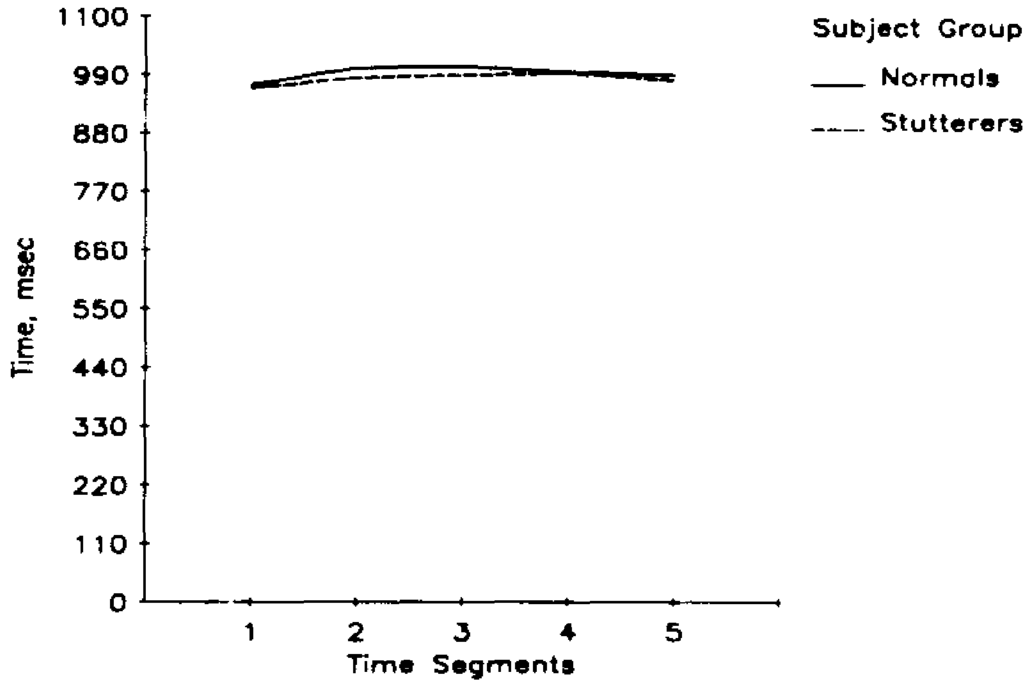
Stressed syllable duration was measured from one /b/ burst to the next. The final syllable duration was not measured due to expected "end of the utterance" lengthening effects. Thus, there were five durations per task. The mean of each of these durations across repetitions (M1, M2, M3, M4, M5) was computed for each subject. The standard deviations for each subject's repeated production of M1 through M5 were designated SD1, SD2. SD3, SD4, and SD5. Intrasubject

stability was measured for each subject group via repeated measures analysis of variance across the five time segments. The subject group mean syllable durations and standard deviations were compared via independent group t statistics.

Isochronous /ba/ 60 bpm

The subject groups' averages for each of the five time segments obtained from each subject's production of the syllable train /ba ba ba ba ba ba ba/ matched to a 60 beat/minute metronome pace are shown in Figure 1. The target duration for each segment was 1000 msec. The normal subjects produced durations in a 35 msec. range from 970 msec. to 1005 msec. The stutterers produced durations in a 27 msec. range from 963 msec. to 990 msec. Comparisons of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparisons across time segments for each group via repeated measures ANOVA also showed significant differences (F = 3.6, df = 4,36, $p < 0.01$) for the normal group but no significant differences for the stuttering group.

Figure 1. Subject Group Averages
60 bpm
Isochronous /ba ba ba ba ba ba ba/



The subject groups' averages of intrasubject variability for each time segment are shown in Table 1.

Table 1 Average intrasubject standard deviations for each subject group and time segment (in msec.) for isochronous /ba/ 60 bpm

	Segment 1	2	3	4	5	F
Norm	46	38	43	37	44	.86
Stut	67	63	58	49	51	2.77*
t	1.71	2.75*	2.08*	2.03	.92	

* = sig @ .05 level

The normal group's intrasubject standard deviations varied from 37 msec. to 46 msec. Differences across segments were not statistically reliable. In contrast, the stutterers varied from 51 msec. to 67 msec., showing a significant difference in intrasubject variability. Inspection of Table 1 shows that the stutterers refined their control toward the end of the syllable train. The two groups differed in variability at time segments 2 and 3. The stutterers were more variable at both time segments.

Isochronous /ba/ 80 bpm

The subject groups' averages for each of the five time segments obtained from each subject's production of the syllable train /ba ba ba ba ba ba ba/ matched to an 80 beat/minute metronome pace are shown in Figure 2. The target duration for each segment was 750 msec. The normal subjects produced durations in a 28 msec. range from 759 msec. to 787 msec. The stutterers produced durations in a 14 msec. range from 734 msec. to 748 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed a significant difference for the normal group ($F = 2.90$, $df = 4,36$, $p < 0.04$) but no significant difference for the stuttering group. Thus, the stutterers appeared to use a more stable pattern in this task than the normals.

The subjects' groups averages of intrasubject variability for each time segment are shown in Table 2.

Figure 2. Subject Group Averages
80 bpm
Isochronous /ba ba ba ba ba ba ba/

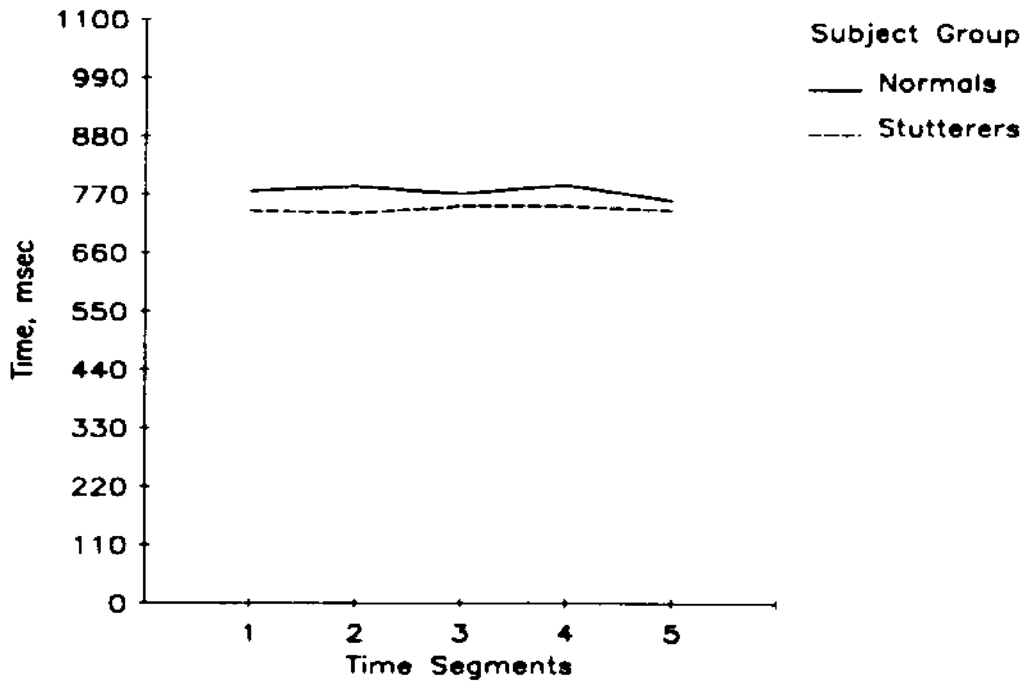


Table 2 Average intrasubject standard deviations for each subject group and time segment (in msec.) for isochronous /ba/ 80 bpm

	Segment 1	2	3	4	5	F
Norm	43	38	41	43	36	.74
Stut	49	44	50	46	42	.81
t	.54	.69	.57	.24	1.19	

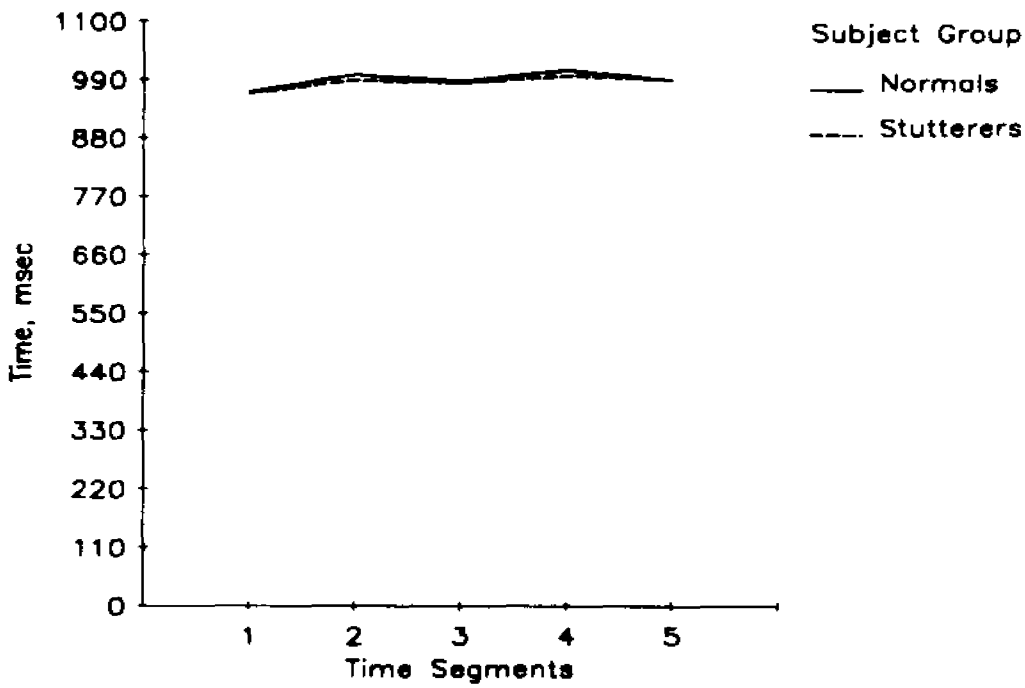
* = sig @ .05 level

The normal group varied from 36 msec. to 43 msec. Differences across segments were not statistically reliable. The stutterers varied from 42 msec. to 50 msec. and also showed no significant differences across segments. The two groups did not differ in variability at any time segment.

Isochronous /bæd/ 60 bpm

The subject groups' averages for each of the five time segments obtained from each subject's production of the syllable train /bæd bæd bæd bæd bæd bæd bæd) matched to a 60 beat/minute metronome pace are shown in Figure 3. The expected burst to burst duration was 1000 msec. The normal subjects produced durations in a 45 msec. range from 963 msec. to 1008 msec. The stutterers

Figure 3. Subject Group Averages
60 bpm
Isochronous /bad bad .../



produced durations in a 30 msec. range from 967 msec. to 997 msec. Comparison of the subject groups for each duration via t statistics revealed no significant difference at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed a significant difference for the normal group ($F = 4.77$, $df = 4,36$, $p < 0.003$) whereas, the stuttering group showed no differences.

The subject groups' averages of intrasubject variability for each time segment are shown in Table 3.

Table 3 Average intrasubject standard deviations for each subject group and time segment (in msec.) for isochronous /bæd/ 60 bpm

	Segment					
	1	2	3	4	5	F
Norm	45	47	39	45	41	1.08
Stut	67	58	59	59	53	.85
t	2.81*	1.31	2.51*	1.40	1.98	

* = sig @ .05 level

The normal group varied from 39 msec. to 47 msec. Differences across segments were not statistically reliable. The stutterers varied from 53 msec. to 67 msec. also showing no significant differences in intrasubject variability. However, there was a trend

for the stutterers to attain better control toward the end of the syllable train. The two groups differed in variability at time segments 1 and 3. The stutterers were more variable at both time segments.

Isochronous /bræd/ 60 bpm

The subject groups' averages for each of the five time segments obtained from each subject's production of the syllable train /bræd bræd bræd bræd bræd bræd bræd/ matched to a 60 beat/minute metronome pace are shown in Figure 4. The expected burst to burst duration was 1000 msec. The normal subjects produced durations in a 37 msec. range from 966 msec. to 1003 msec. The stutterers produced durations in a 52 msec. range from 958 msec. to 1010 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed a significant difference for the normal group ($F = 3.47$, $df = 4, 36$, $p < 0.02$) but, no significant difference for the stuttering group.

The subject groups' averages of intrasubject variability for each time segment are shown in Table 4.

Figure 4. Subject Group Averages
60 bpm
Isochronous /brad brad .../

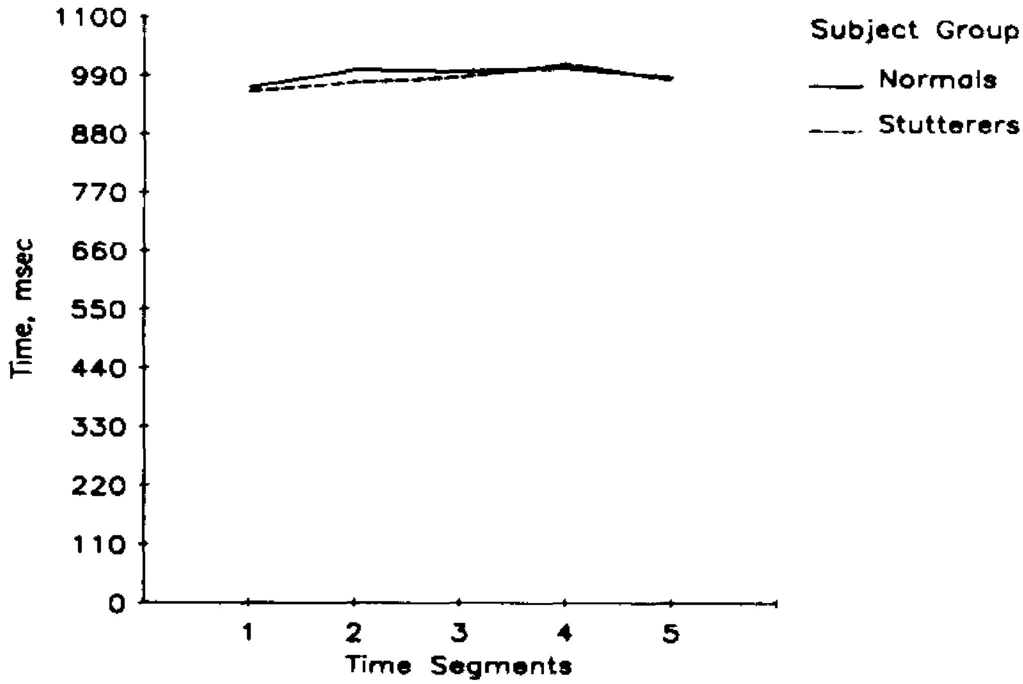


Table 4 Average intrasubject standard deviations for each subject group and time segment (in msec.) for isochronous /bræd/ 60 bpm

	Segment 1	2	3	4	5	F
Norm	52	50	47	63	55	.99
Stut	69	55	55	55	64	1.03
t	1.26	.63	1.36	-.79	1.07	

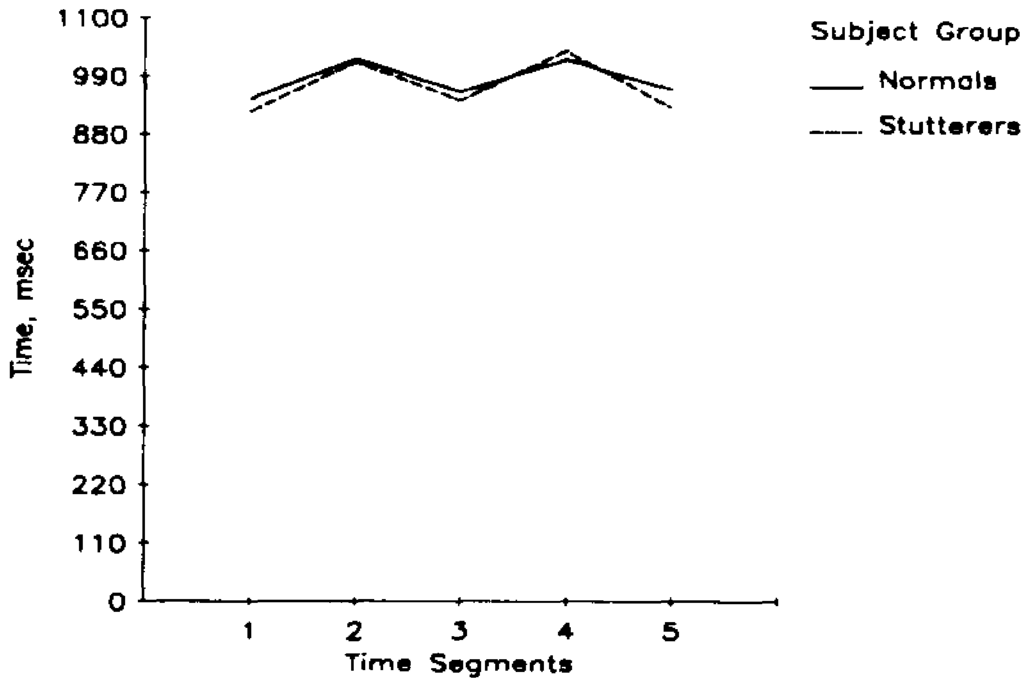
* = sig @ .05 level

The normal group varied from 47 msec. to 63 msec. Differences across segments were not statistically reliable. The stutterers varied from 55 msec. to 69 msec. and also showed no significant differences in intrasubject variability. The two groups did not differ in variability for any time segment.

Isochronous /bæd bræd/ 60 bpm

The subject groups' averages for each of the five time segments obtained from each subject's production of the syllable train /bæd bræd bæd bræd bæd bræd bæd/ matched to a 60 beat/minute metronome pace are shown in Figure 5. The expected burst to burst duration was 1000 msec. The normal subjects produced durations in a 75 msec. range from 946 msec. to 1021 msec. The stutterers

Figure 5. Subject Group Averages
60 bpm
Isochronous /bad brad .../



produced durations in a 117 msec. range from 921 msec. to 1038 msec. Comparisons of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments for each group via repeated measures ANOVA showed significant differences for the normal group ($F = 11.96$, $df = 4, 36$, $p < 0.00000$) and the stuttering group ($F = 11.03$, $df = 4, 36$, $p < 0.00001$) which were attributed to the phonetic differences between /bæd/ and /bræd/ resulting in longer time segments 2 and 4.

The subject groups' averages of intrasubject variability for each time segment are shown in Table 5.

Table 5 Average intrasubject standard deviations for each subject group and time segement (in msec.) for isochronous /bæd bræd/ 60 bpm

	Segment					
	1	2	3	4	5	F
Norm	48	44	61	47	58	2.08
Stut	98	70	82	79	62	2.30
t	2.16*	2.53*	1.57	2.61*	.46	

* = sig @ .05 level

The normal group varied from 44 msec. to 61 msec. Differences across segments were not statistically reliable. The stutterers varied from 62 **msec.** to 98 msec. and also showed no significant differences across time segments. The two groups differed in variability at time segments 1, 2, and 4 with the stuttering groups showing more variability for all three segments. Again, the stutterers showed less stability toward the beginning of the utterance.

Metronome Rhythmicity Summary

In summary, comparison of the subject groups for each duration in all metronome rhythmicity tasks via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences on all tasks for the normal group and significant differences on /bæd/ and /bæd bræd/ tasks for the stuttering group. Significant between group difference in intrasubject variability occurred on the slow task at time segments 2 and 3 but not on the fast task. The two groups also differed in variability on the /bæd/ task at time segments 1 and 3 and on the /bæd bræd/ task at time segments 1, 2 and 3. **Within** group differences in intrasubject variability across time

segments were not statistically reliable on all tasks for both groups except on the /ba/ 60 bpm task for the stuttering group. However, there was a trend for stuttering children to show less response stability at the beginning of the utterance.

Delayed Imitation

Digitized Live Voice

Stuttering children were compared to their nonstuttering peers in their ability to control syllable durations of varying linquistic complexity as stress and rate were varied.

Each group imitated repetitions of digitized live voice nonsense syllable trains /'ba 'ba 'ba/ (fast and slow rate), /'ba ba ba/, and /ba 'ba ba/ until ten fluent productions of each rate and stress condition were obtained. Syllable duration was measured from one /b/ burst to the next. Thus, there were two durations per task. The mean of each of these durations across repetitions was computed for each subject (M1 and M2). The standard deviations across repetitions of each subject of M1 and M2 were designated SD1 and SD2. These subject group mean syllable durations and their standard deviations were compared via independent group t-statistic. Intrasubject stability was measured within each subject group via repeated measures analyses of variance across the two time segments. The two mean duration intervals per task (M1 and M2) were used to form ratios that could be compared across speaking rate

and stress conditions to test the hypothesis of relative timing stability.

/'ba 'ba 'ba/ (slow rate)

The subject groups' averages for each of the two time segments obtained from each subject's production of the syllable train /'ba 'ba 'ba/ (slow rate) are shown in Figure 6. The expected syllable duration was 500 msec. The normal subjects produced an M1 duration of 500 msec. and an M2 duration of 506 msec. The stutterers produced an M1 duration of 485 msec. and an M2 duration of 505 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA also showed no significant differences for the normal group but, significant differences for the stuttering group ($F = 9.52$, $df = 1,9$, $p < 0.01$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 6.

Figure 6. Subject Group Averages
Digitized Live Voice
/'ba 'ba 'ba/ Slow Rate

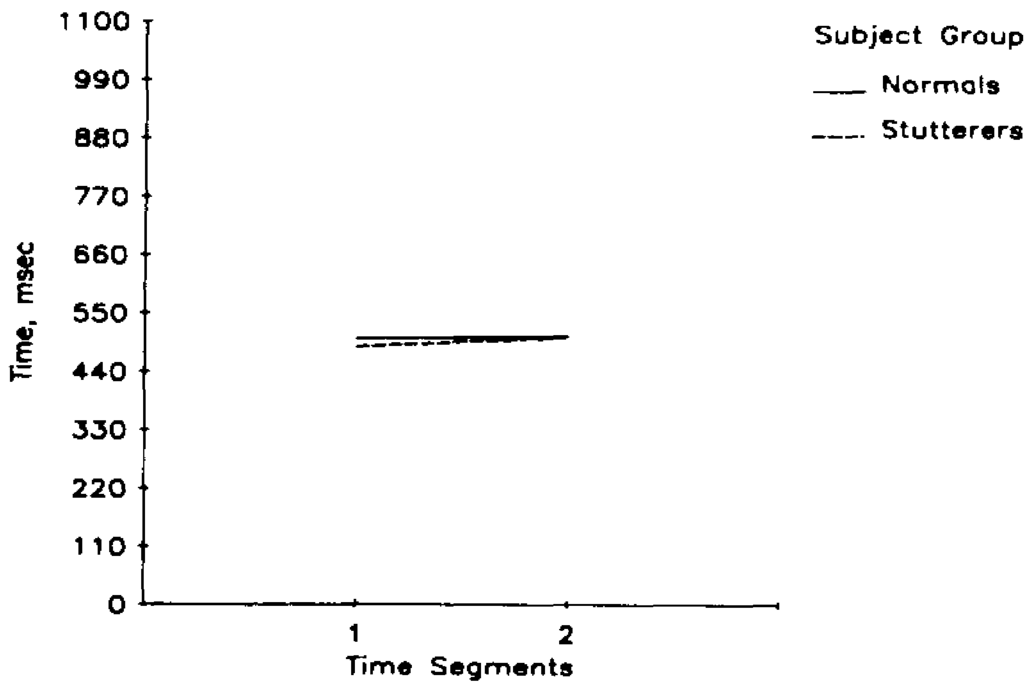


Table 6 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /'ba 'ba 'ba/ (slow rate)

	Segment 1	2	F
Norm	25	28	2.46
Stut	48	29	3.13
t	2.00	.23	

* = sig @ .05 level

The normal group varied from 25 msec. to 28 msec. Differences across segments were not statistically reliable. The stutterers varied from 48 msec. to 29 msec. also showing no significant difference in intrasubject variability. The two groups did not show between group variability differences at either time segment.

The subject groups' averages for the two time segments shown in Figure 6 were used to form ratios (M1/M2). The expected ratio was 1.0. The normal group obtained a ratio score of .99 and the stuttering group obtained a ratio score of .96. Both scores approached the expected 1.0 value. The independent t statistic yielded no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 7. The independednt t statistic yielded a significant difference between the two groups.

Table 7 Average intrasubject standard deviations for each subject groups' ratio for /'ba 'ba 'ba/ (slow rate)

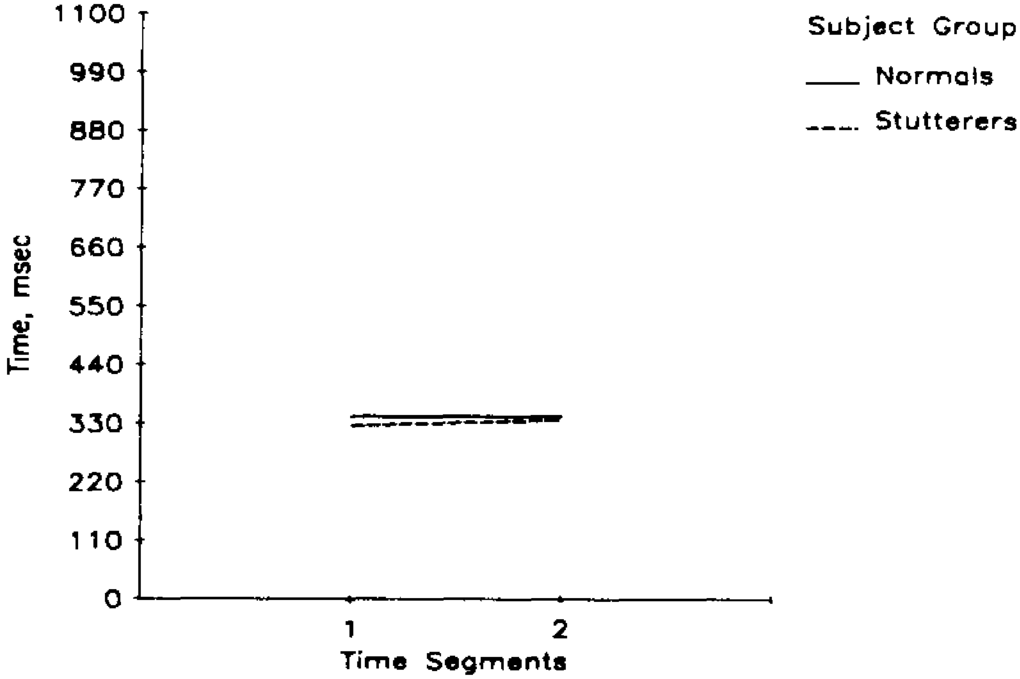
	SD1/SD2
Norm	.9526
Stut	1.8583
t	2.30*

* = sig @ .05 level

/'ba 'ba 'ba/ (fast rate)

The subject groups' averages for each of the two time segments obtained from each subject's production of the syllable train /'ba 'ba 'ba/ (fast rate) are shown in Figure 7. The expected syllable duration was 333 msec. The normal subjects produced M1 and M2 durations of 343 msec. each. The stutterers produced an M1 duration of 325 msec. and an M2 duration of 337 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the

Figure 7. Subject Group Averages
Digitized Live Voice
/'ba 'ba 'ba/ Fast Rate



.05 level of confidence. Comparison across time segments via repeated measures ANOVA also showed no significant differences for the normal group, but significant differences for the stuttering group ($F = 5.61$, $df = 1,9$, $p < 0.04$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 8.

Table 8 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /'ba 'ba 'ba/ (fast rate)

	Segment 1	Segment 2	F
Norm	24	23	.12
Stut	27	24	.80
t	.50	.43	

* = sig @ .05 level

The normal group varied from 24 msec. to 23 msec. Differences across segments were not statistically reliable. The stutterers varied from 27 msec. to 24 msec. also showing no significant difference in intrasubject variability. The two groups did not show between group variability differences at either time segment.

The subject groups' averages for the two time segments shown in Figure 7 were used to form ratios (M1/M2). The expected ratio was 1.0. The normal group obtained a ratio score of 1.0007 which slightly exceeded the expected score and the stuttering group obtained a ratio score of .97 which approached the expected ratio score. The independent t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 9. The independent t statistic revealed no significant difference between the two groups.

Table 9 Average intrasubject standard deviations for each subject group ratio for /'ba 'ba 'ba/ (fast rate)

	SD1/SD2
Norm	1.0246
Stut	1.1712
t	.72

* = sig @ .05 level

/'ba ba ba/

The subject groups' averages for each of the two time segments obtained from each subject's production of the syllable train /'ba ba ba/ are shown in Figure 8. The expected first syllable duration was 500 msec. and the expected second syllable duration was 333 msec. The normal subjects produced an M1 duration of 507 msec. and an M2 duration of 302 msec. The stutterers produced an M1 duration of 476 msec. and an M2 duration of 315 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 107.7$, $df = 1,8$, $p < 0.00001$) and the stuttering group ($F = 25.2$, $df = 1,9$, $p < 0.0007$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 10.

Figure 8. Subject Group Averages
Digitized Live Voice
/'ba ba ba/

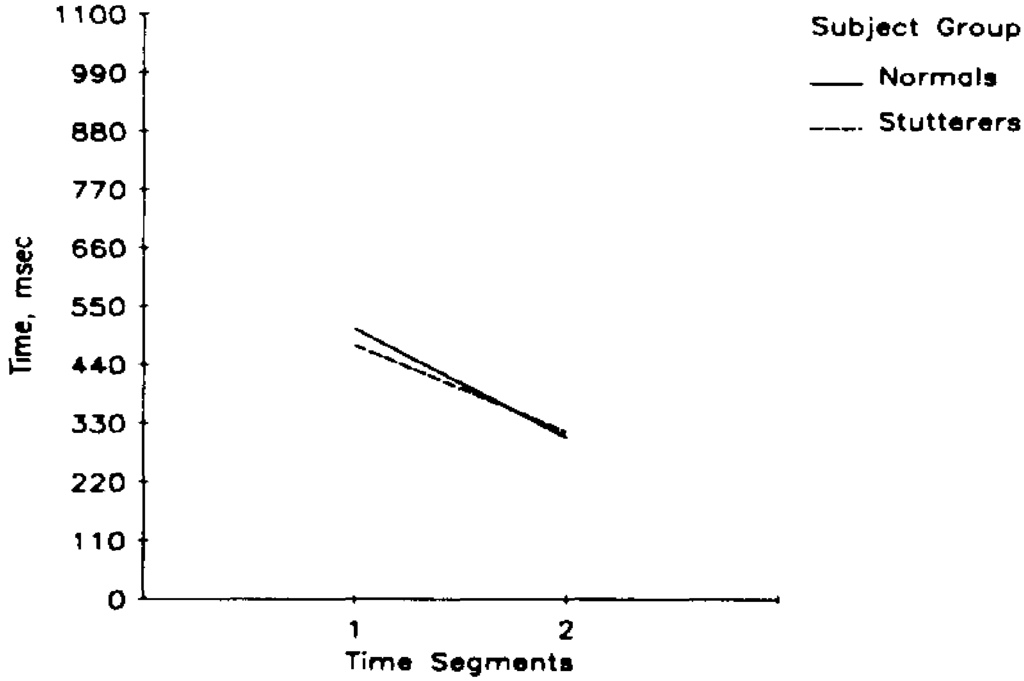


Table 10 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /'ba ba ba/

	Segment 1	2	F
Norm	38	22	7.3*
Stut	44	33	7.1*
t	.74	1.25	

* = sig @ .05 level

The normal group varied from 38 msec. to 22 msec. The stutterers varied from 44 msec. to 33 msec. Differences across segments were statistically reliable for both groups. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 8 were used to form ratios (M1/M2). The expected ratio should be greater than 1.0 in the stressed/unstressed condition. The normal group obtained a ratio score of 1.68 and the stuttering group of 1.55 Both scores met the expected ratio score. The independent t statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject ratio variability are shown in Table 11. The independent t statistic yielded no signficiant difference between the two groups.

Table 11 Average intrasubject standard deviations for each subject group ratio for /'ba ba ba/

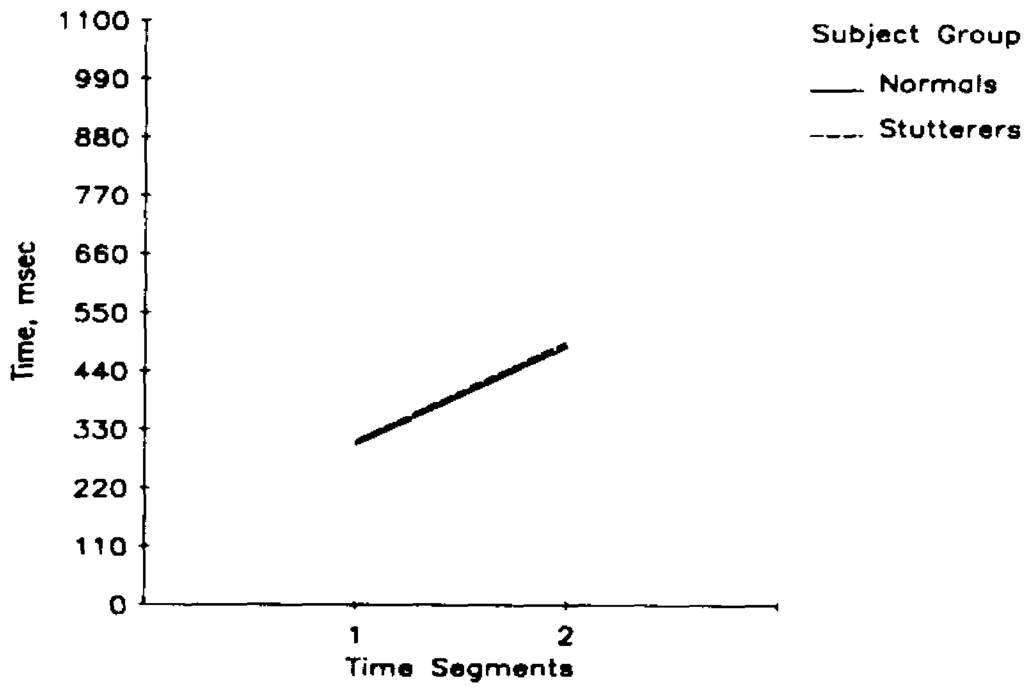
	Segment SD1/SD2
Norm	2.1838
Stut	1.4803
t	-1.36

* = sig @ .05 level

/ba 'ba ba/

The subject groups' averages for each of the two time segments obtained from each subject's production of the syllable train /ba 'ba ba/ are shown in Figure 9. The expected unstressed syllable duration was 333 msec. and the expected stressed syllable duration was 500 msec. The normal subjects produced an M1 duration of

Figure 9. Subject Group Averages
Digitized Live Voice
/ba 'ba ba/



301 msec. and an M2 duration of 486 msec. The stutterers produced an M1 duration of 307 msec. and an M2 duration of 494 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA revealed significant differences for the normal group ($F = 132$, $df = 1,8$, $p < 0.00000$) and the stuttering group ($F = 55.9$, $df = 1,8$, $p < 0.00007$).

The subject groups' averages of intra subject variability for each time segment are shown in Table 12.

Table 12 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /ba 'ba ba/

	Segment		
	1	2	F
Norm	22	36	33.10*
Stut	40	51	1.05
t	1.62	1.26	

* = sig @ .05 level

The normal group varied from 22 msec. to 36 msec. Differences across segments were statistically reliable. The stutterers varied from 40 msec. to 51 msec. Differences across segments were not statistically

reliable. The two groups did not show between group variability at either time segment.

The subject groups' averages of intrasubject variability for the two time segments shown in Figure 9 were used to form ratios (M1/M2). The expected ratio should be fractional in the unstressed/stressed condition. The normal group obtained a ratio score of .62 and the stuttering group obtained a ratio score of .64. Both scores met the expected fractional values. The independent t statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject ratio variability are shown in Table 13. The independent t statistic revealed no significant difference between the two groups.

Table 13 Average intrasubject standard deviations for each subject group ratio for /ba 'ba ba/

	SD1/SD2
Norm	.5894
Stut	1.0126
t	1.82

* = sig @ .05 level

Digitized Live Voice Summary

In summary, comparison of the subject groups for each duration in all digitized live voice tasks via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments for the normal group via repeated measures ANOVA showed no significant differences on the rate tasks but expected significant differences on the stress altering task. Comparison across time segments for the stuttering group via repeated measures ANOVA showed significant differences on all rate and stress tasks. No significant between group differences in intrasubject variability occurred on either the rate or stress tasks. Within group differences in intrasubject variability across time segments on the rate tasks were not statistically reliable for either group. Within group differences in intrasubject variability across time segments were statistically reliable on both stress tasks for the normal group but only on the stressed/unstressed for the stuttering group. Comparison of the subject groups' average ratio scores via t statistics revealed no significant differences at the .05 level of confidence. Significant between group differences in intrasubject ratio variability occurred on the slow rate task only.

Intra-syllable Timing Patterns

Stuttering children were compared to their nonstuttering peers in their ability to produce through imitation of a language master presentation ten fluent productions of words expanded through clustering or suffixing. These words and their expanded forms were immersed in a carrier phrase. The duration of /s/ was measured in those words expanded by clustering and the duration of the base word was measured in those words expanded through suffixing.

Cluster patterns included:

(I sit again.)
(I spit again.)
(I split again.)

Suffix patterns included:

(Say stick again.)
(Say sticky again.)
(Say stickily again.)

(Say tick again.)
(Say ticker again.)
(Say tickertape again.)

(Say con again.)
(Say constitute again.)
(Say constitution again.)
(Say constitutionality again.)

Clusters

(sit, spit, split)

The subject groups' averages of /s/ duration in the above noted cluster utterances were designated M1, M2 and M3, respectively and are shown in Figure 10. The normal group produced durations of 200 msec., 157 msec. and 142 msec., respectively. The stutterers produced durations of 194 msec., 178 msec. and 161 msec., respectively. Comparisons of the subject groups for each /s/ duration within a cluster utterance via t statistics revealed no significant differences at the .05 level of confidence.

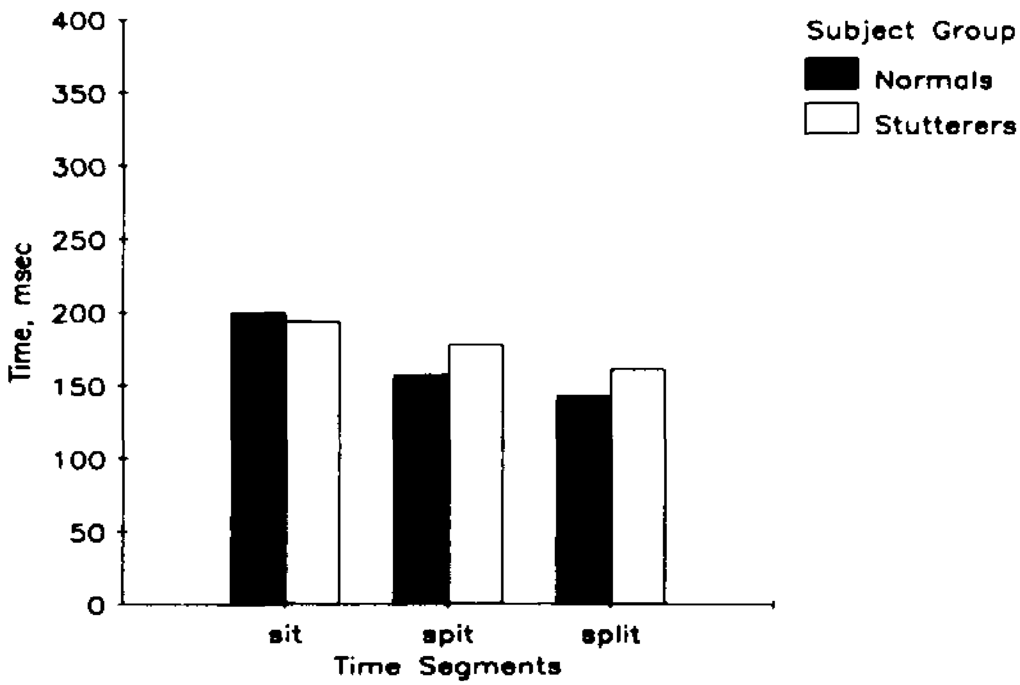
The subject groups' averages of intrasubject variability for each /s/ duration within a cluster utterance are shown in Table 14.

Table 14 Average intrasubject standard deviations for each subject group (in msec.) for /s/ duration in (sit, spit, split)

	Segment 1	2	3
Norm	34	22	15
Stut	23	33	30
t	-1.02	1.61	2.97*

* = sig @ .05 level

Figure 10. Subject Group Averages
Intra-Syllable Timing
/s/ duration



The normal group varied from 15 msec. to 34 msec. and the stutterers varied from 22 msec. to 33 msec. The two groups differed in variability on /s/ duration within the cluster /spl/ only.

Cluster Summary

In summary, comparison of the subject groups for each /s/ duration in all cluster tasks via t statistics revealed no significant differences at the .05 level of confidence. The two groups differed in variability on /s/ duration with the cluster /spl/ only. The following nonsignificant differences were noted. The normal group and the stuttering group produced an /s/ of similar duration in the cluster utterance (I sit again.) but the normal group showed slightly greater intrasubject variability. As the cluster length increased, however, the normal group tended to show more decrease in /s/ duration as compared to their stuttering peers and less variability.

Suffixes

(stick, sticky, stickily)

The subject groups' averages of /stIk/ duration in the above noted suffix utterances were designated M1, M2 and M3 respectively and are shown in Figure 11. The normal group produced durations of 360 msec., 342 msec., and 320 msec. respectively. The stutterers produced durations of 350 msec., 321 msec., and 295 msec. respectively. Comparisons of the subject groups for each /stIk/ duration within a suffix utterance via t statistics revealed no significant differences at the .05 level of confidence.

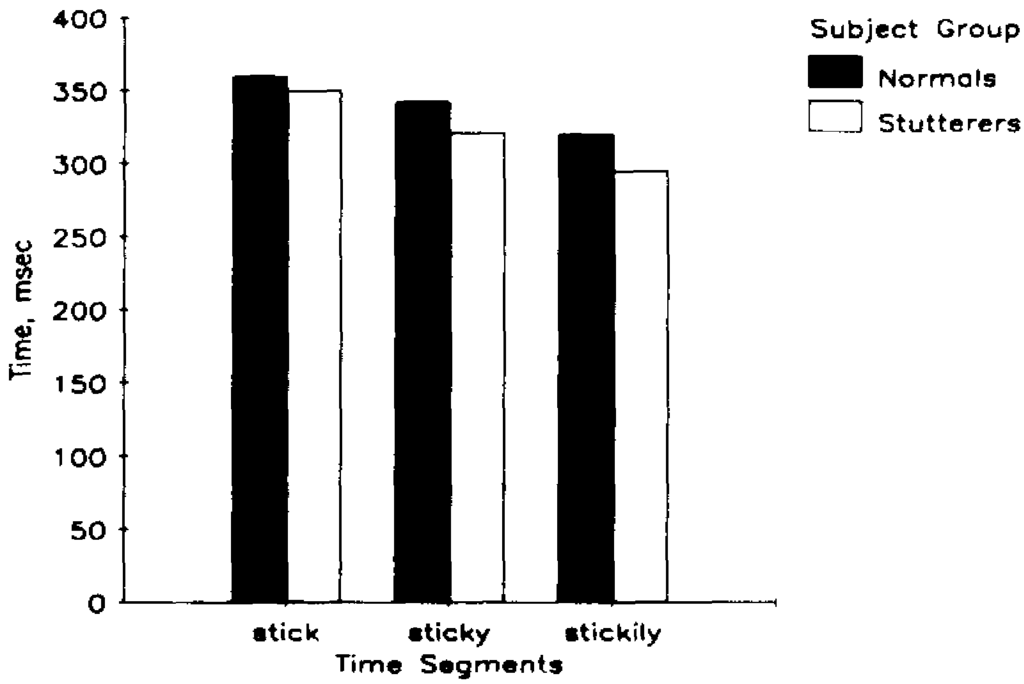
The subject groups' averages of intrasubject variability for each /stIk/ duration within a suffix utterance are shown in Table 15.

Table 15 Average intrasubject standard deviations for each subject group (in msec.) for /stIk/ in (stick, sticky, stickily)

	Segment 1	2	3
Norm	34	24	32
Stut	26	25	25
t	-1.43	.30	-.93

* = sig @ .05 level

Figure 11. Subject Group Averages
Intra-Syllable Timing
/stIk/ duration



The normal group varied from 24 msec. to 34 msec. and the stutterers varied from 25 msec. to 26 msec. The two groups did not differ in variability on /stIk/ duration within the suffix utterances.

(tick, ticker, tickertape)

The subject groups' averages of /tIk/ duration in the above noted suffix utterances were designated M1, M2 and M3, respectively and are shown in Figure 12. The normal group produced durations of 156 msec., 149 msec. and 134 msec. respectively. The stutterers produced durations of 153 msec., 145 msec., and 118 msec. respectively. Comparisons of the subject groups for each /tIk/ duration within a suffix utterance via t statistics revealed no significant differences at the .05 level of confidence.

The subject groups' averages of intrasubject variability for each /stIk/ duration within a suffix utterance are shown in Table 16.

Figure 12. Subject Group Averages
Intra-Syllable Timing
/tIk/ duration

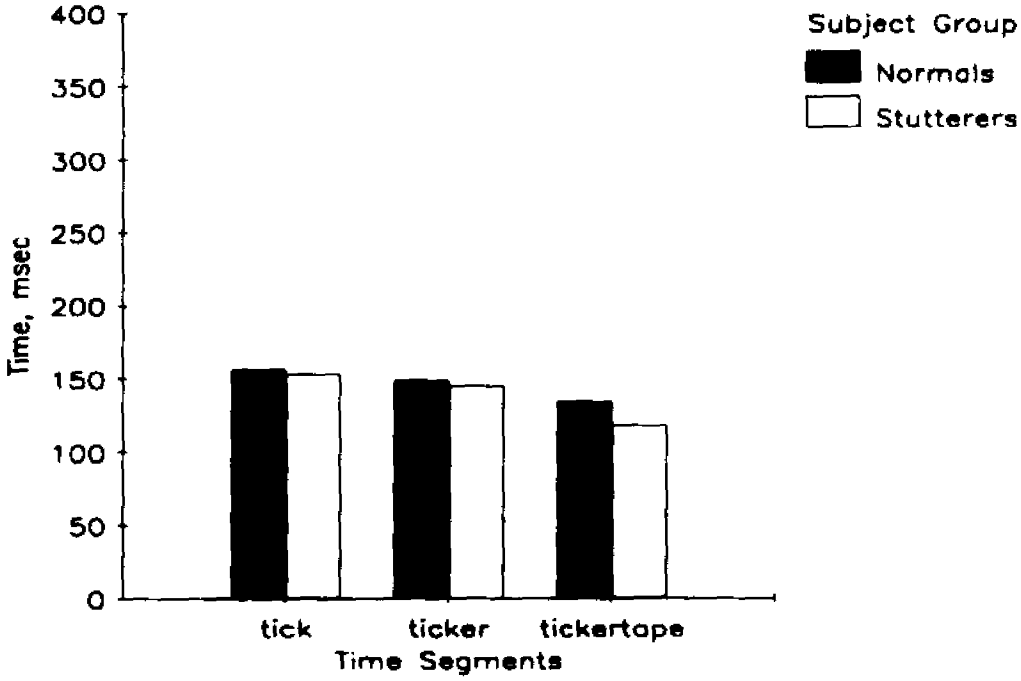


Table 16 Average intrasubject standard deviations for each subject group (in msec.) for /tIk/ durations in (tick, ticker, tickertape)

	Segment 1	2	3
Norm	18	19	18
Stut	20	20	25
t	-.36	-.40	-1.62

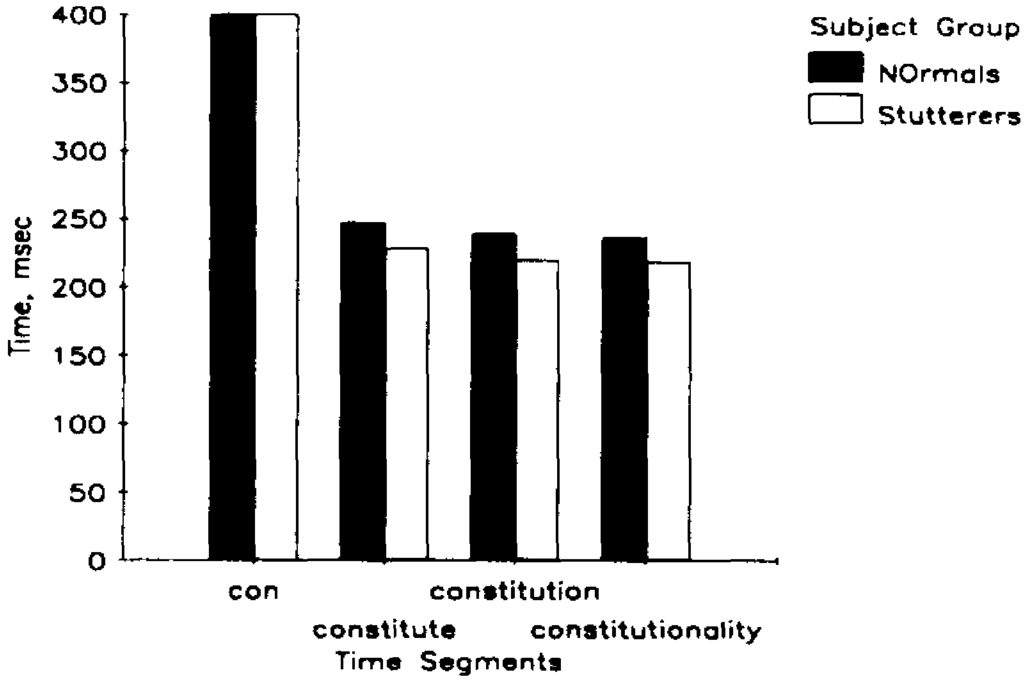
* = sig @ .05 level

The normal group varied from 18 msec. to 19 msec. and the stutterers varied from 20 msec. to 25 msec. The two groups did not differ in variability on /tIk/ duration within the suffix utterances.

(con, constitute, constitution, constitutionality)

The subject groups' averages of /kan/ duration in the above noted suffix utterances were designated M1, M2, M3, and M4 respectively and are shown in Figure 13. Some subjects could not perform this task. The normal group produced durations of 420 msec., 228 msec., 220 msec., and 218 msec. respectively. The stutterers produced durations of 434 msec., 247 msec.,

Figure 13. Subject Group Averages
Intra-Syllable Timing
/kan/ duration



239 msec., and 236 msec. respectively. Comparisons of the subject groups for each /kan/ duration within a suffix utterance via t statistics revealed no significant differences at the .05 level of confidence.

The subject groups' averages of intrasubject variability for each /kan/ duration within a cluster utterance are shown in Table 17.

Table 17 Average intrasubject standard deviations for each subject group (in msec.) for /kan/ duration in (con, constitute, constitution, constitutionality)

	Segment 1	Segment 2	Segment 3	Segment 4
Norm	35	18	15	19
Stut	47	18	21	22
t	1.51	.11	1.62	.56

* = sig @ .05 level

Suffix Summary

In summary, comparison of the subject groups for each base word duration in all suffix tasks via t statistics revelaed no significant differences at the .05 level of confidence. Both groups showed similar average intrasubject variability. A trend to decrease the duration of the base words /stIk/, /tIk/, and /kan/ as the suffix lengthened was noted for both groups.

Variable Phonetic Complexity

Stuttering children were compared to their nonstuttering peers in their ability to produce through imitation of a language master presentation ten fluent productions of three sentences with variable phonetic complexity and their respective counterparts. These sentences and their reiterative counterparts had equivalent stress patterns.

Bob and	Becky ate	peanut butter.
ba ba	baba ba	baba baba.
3	2	1
Barry and	Christopher bought	candy.
baba ba	bababa ba	baba.
3	2	1
Christopher can	dunk the	basketball.
bababa ba	ba ba	bababa.
3	2	1

Duration segments were measured from the consonant burst of one accent point to the consonant burst of the next accent point. Thus, there were two duration segments per sentence designated M1 and M2.

(Bob and Becky ate peanut butter.)

The subject groups' averages for each of the two time segments obtained from each subject's production of the sentence Bob and Becky ate peanut butter. are shown

in Figure 14. The normal subjects produced durations in a 42 msec. range from 803 msec. to 761 msec. The stutterers produced durations in a 26 msec. range from 785 msec. to 759 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segements via repeated measures ANOVA showed significant differences for the normal group ($F = 9.73$, $df = 1,9$, $p < 0.01$) but no significant differences for the stuttering group.

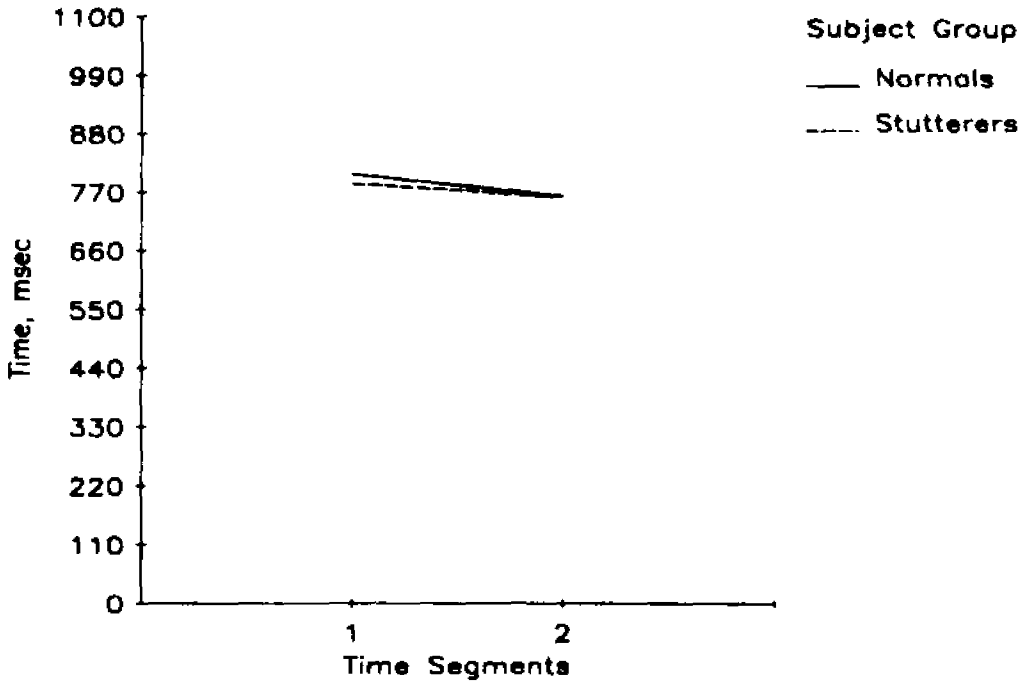
The subject groups' averages of intrasubject variability for each time segment are shown in Table 18.

Table 18 Average intrasubject standard deviations for each subject group and time segment (in msec.) for <u>Bob and Becky ate peanut butter.</u>

	Segment 1	2	F
Norm	49	45	1.72
Stut	95	71	.73
t	1.68	1.93	

* = sig @ .05 level

Figure 14. Subject Group Averages
Variable Phonetic Complexity
(Bob and Becky ate peanut butter.)



The normal group varied from 49 msec. to 45 msec. Differences across segments were not statistically reliable. The stutterers varies from 95 msec. to 71 msec. also showing no significant differences in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 14 were used to form ratios (M1/M2). The expected ratio value was approximately 1.0 The normal group obtained a ratio score of 1.06 and the stuttering group obtained a ratio score 1.04. Both scores were near the expected ratio value of 1.0. The independent t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 19. The independent t statistic revealed no significant difference between the two groups.

Table 19 Average intrasubject standard deviations for each subject groups' ratio for Bob and Becky ate peanut butter.

	SD1/SD2
Norm	1.1275
Stut	1.6571
t	.92

* = sig @ .05 level

Barry and Christopher bought candy.

The subject groups' averages for each of the two time segments obtained from each subject's production of the sentence Barry and Christopher bought candy. are shown in Figure 15. The normal subjects produced durations in a 233 msec. range from 787 msec. to 1020 msec. The stutterers produced durations in a 260 msec. range from 760 msec. to 1020 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 82.31$, $df = 1,9$, $p < 0.00001$) and for the stuttering group ($F = 133.9$, $df = 1,9$, $p < 0.00000$).

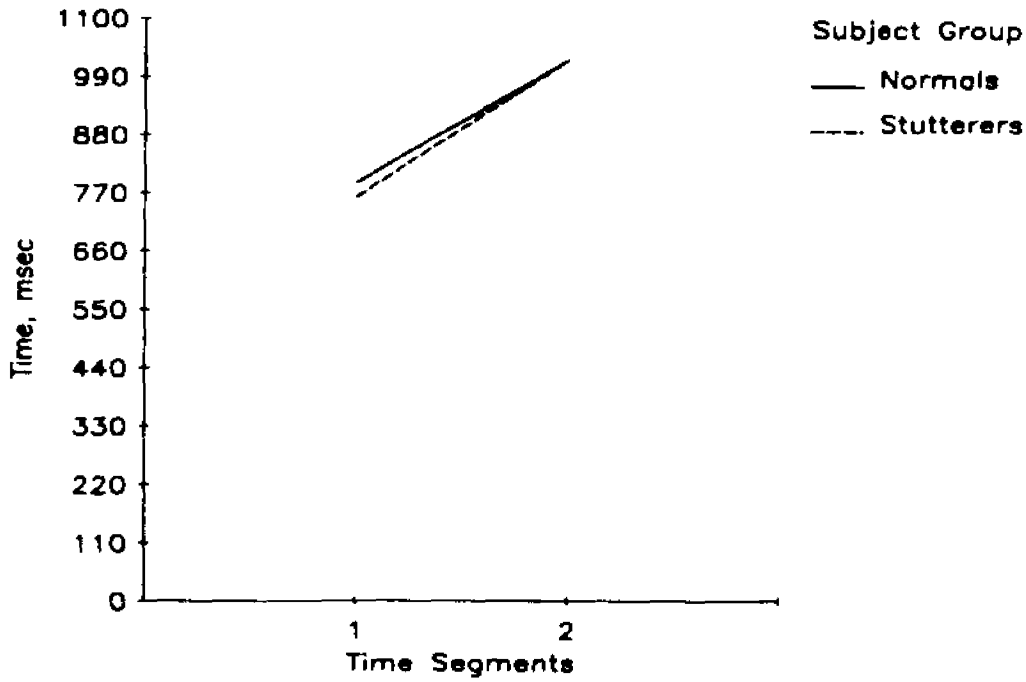
The subject groups' averages of intrasubject variability for each time segment are shown in Table 20.

Table 20 Average intrasubject standard deviations for each subject group and time segment (in msec.) for Barry and Christopher bought candy.

	Segment 1	Segment 2	F
Norm	66	62	0.09
Stut	79	105	2.83
t	.85	2.57*	

* = sig @ .05 level

Figure 15. Subject Group Averages
Variable Phonetic Complexity
(Barry and Christopher bought candy.)



The normal group varied from 66 msec. to 62 msec. Differences across segments were no statistically significant. The stuttering group varied from 79 msec. to 105 msec. also showing no significant difference in intrasubject variability. The two groups showed between group differences on time segment two only.

The subject groups' averages for the two time segments shown in Figure 15 were used to form a ratio (M1/M2). The expected ratio value was approximately 1.0. The normal group obtained a ratio score of .77 and the stuttering group obtained a ratio score of .75. Both scores fell short of the expected ratio value of 1.0. The independent t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 21. The independent t statistic revealed no significant difference between the two groups.

Table 21 Average intrasubject standard deviations for each subject groups' ratio for Barry and Christopher bought candy.

	SD1/SD2
Norm	1.1802
Stut	.8582
t	-1.25

* = sig @ .05

Christopher can dunk the basketball.

The subject groups' averages for each of the two time segments obtained from each subject's production of the sentence Christopher can dunk the basketball. are shown in Figure 16. The normal subjects produced durations in a 398 msec. range from 1063 msec. to 665 msec. The stutterers produced durations in a 363 msec. range from 1009 msec. to 646 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 326.9$, $df = 1,9$, $p < 0.00000$) and the stuttering group ($F = 291.2$, $df = 1,9$, p 0.00000).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 22.

Figure 16. Subject Group Averages
Variable Phonetic Complexity
(Christopher can dunk the basketball.)

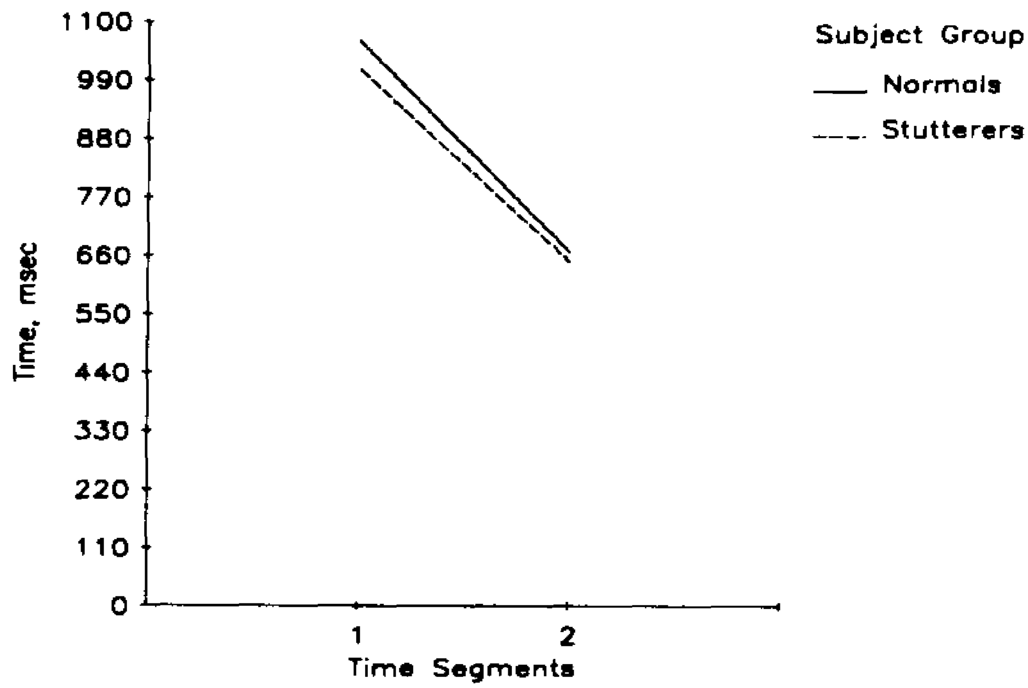


Table 22 Average intrasubject standard deviations for each subject group and time segment (in msec.) for Christopher can dunk the basketball.

	Segment 1	2	F
Norm	90	62	2.53
Stut	97	64	3.04
t	.30	.20	

* = sig @ .05

The normal group varied from 90 msec. to 62 msec. Differences across segments were not statistically reliable. The stutterers varied from 97 msec. to 64 msec. also showing no significant difference in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 16 were used to form a ratio (M1/M2). The expected ratio value was approximately 1.0. The normal group obtained a ratio score of 1.62 and the stuttering group obtained a ratio score of 1.57 Both scores exceeded the expected ratio value of approximately 1.0. The independent t-statistic revealed no significant differences between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 23. The independent t statistic revealed no significant difference between the two groups.

Table 23 Average intrasubject standard deviations for each subject groups' ratio for Christopher can dunk the basketball.

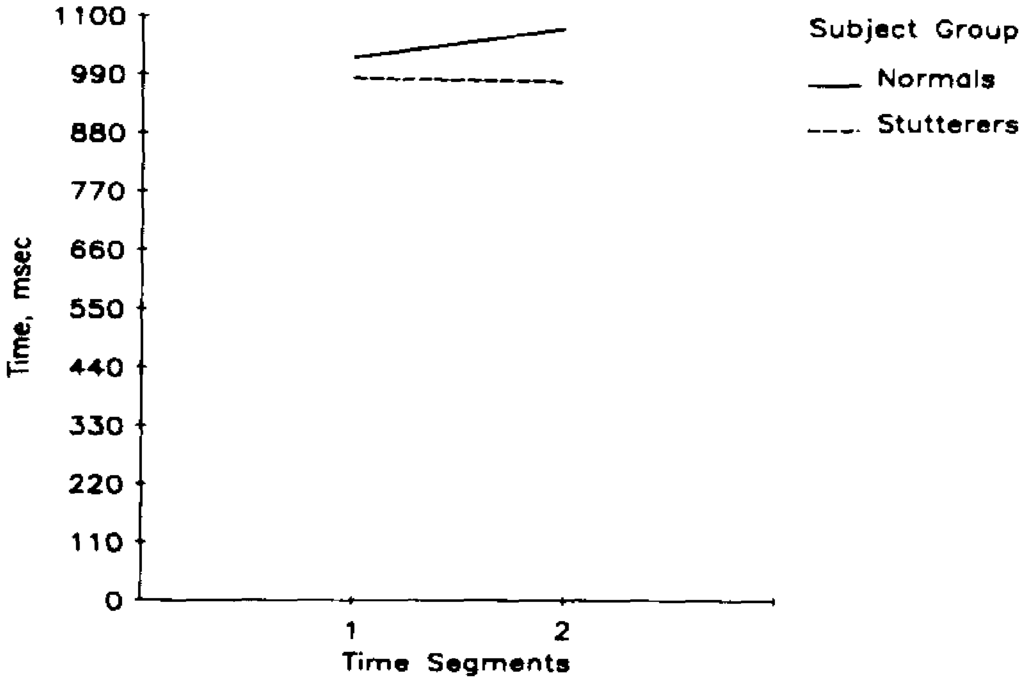
	SD1/SD2
Norm	1.6062
Stut	1.8040
t	.37

* = sig @ .05 level

/ba ba baba ba baba baba./

The subject groups' averages for each of the two time segments obtained from each subject's production of the reiterative counterpart of Bob and Becky ate peanut butter., /ba ba baba ba baba baba./, are shown in Figure 17. The normal subjects produced durations in a 54 msec. range from 1020 msec. to 1074 msec. The stutterers produced durations in a 6 msec. range from 981 msec. to 975 msec. Comparison of the subject groups for each duration via t statistic revealed no

Figure 17. Subject Group Averages
Reiterative Sentence
(Bob and Becky ate peanut butter.)



significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed no significant differences for either group.

The subject groups' averages of intrasubject variability for each time segment are shown in Table 24.

Table 24 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /ba ba baba ba baba baba./

	Segment 1	2	F
Norm	50	60	1.97
Stut	56	70	.88
t	.69	.71	

* = sig @ .05 level

The normal group varied from 50 msec. to 60 msec. Differences across segments were not statistically reliable. The stutterers varied from 56 msec. to 70 msec. also showing no significant differences in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups'averages for the two time segments shown in Figure 17 were used to form ratios (M1/M2). The expected ratio value was approximately 1.0. The normal group obtained an M1/M2 ratio score of .96 and the stuttering group obtained an M1/M2 ratio

score of 1.01. The normal group's score fell slightly short of the expected ratio value of 1.0. The stuttering group's score slightly exceeded the expected ratio value of 1.0. The independent t statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 25. The independent t statistic revealed no significant difference between the two groups.

Table 25 Average intrasubject standard deviations for each subject groups' ratio for /ba ba baba ba baba baba./

	SD1/SD2
Norm	.9572
Stut	1.0174
t	.21

* = sig @ .05 level

/baba ba bababa ba baba./

The subject groups' averages for each of the two time segments obtained from each subject's production of the reiterative counterpart of Barry and Christopher bought candy., /baba ba bababa ba baba./, are shown in Figure 18. The normal group produced durations in a 15 msec. range from 991 msec. to 1006 msec. The stutterers produced durations in a 49 msec. range from 979 msec. to 1028 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 5.18$, $df = 1,9$, $p < 0.05$) but, no significant differences for the stuttering group.

The subject groups' averages of intrasubject variability for each time segment are shown in Table 26.

Figure 18. Subject Group Averages
Reiterative Sentence
(Barry and Christopher bought candy.)

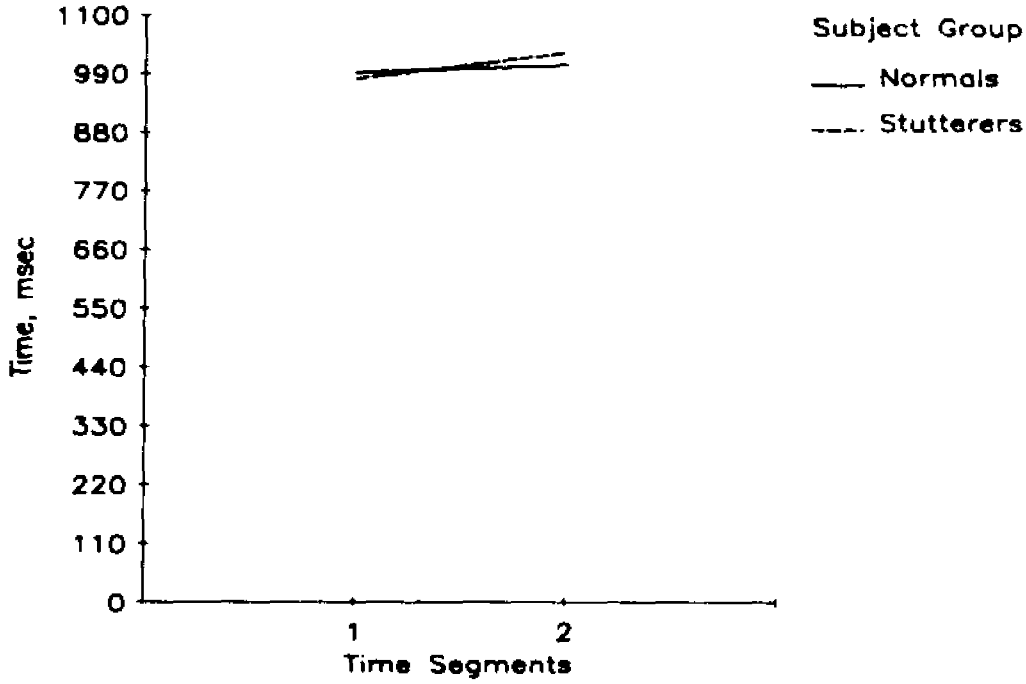


Table 26 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /baba ba bababa ba baba./

	Segment 1	2	F
Norm	32	37	1.17
Stut	54	102	2.20
t	2.38*	2.29*	

* = sig @ .05 level

The normal group varied from 32 msec. to 37 msec. Differences across segments were not statistically reliable. The stutterers varied from 54 msec. to 102 msec. also showing no significant differences in intrasubject variability. The two groups showed significant between group variability at both time segments.

The subject groups' averages for the two time segments shown in Figure 18 were used to form a ratios (M1/M2). The expected ratio value was approximately 1.0. The normal group obtained a ratio score of .99 and the stuttering group obtained a ratio score of .96. Both groups fell slightly short of the expected ratio value of 1.0. The independent

t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject variability are shown in Table 27. The independent t statistic revealed no significant difference between the two groups.

Table 27 Average intrasubject standard deviations for each subject groups' ratio for /baba ba bababa ba baba./

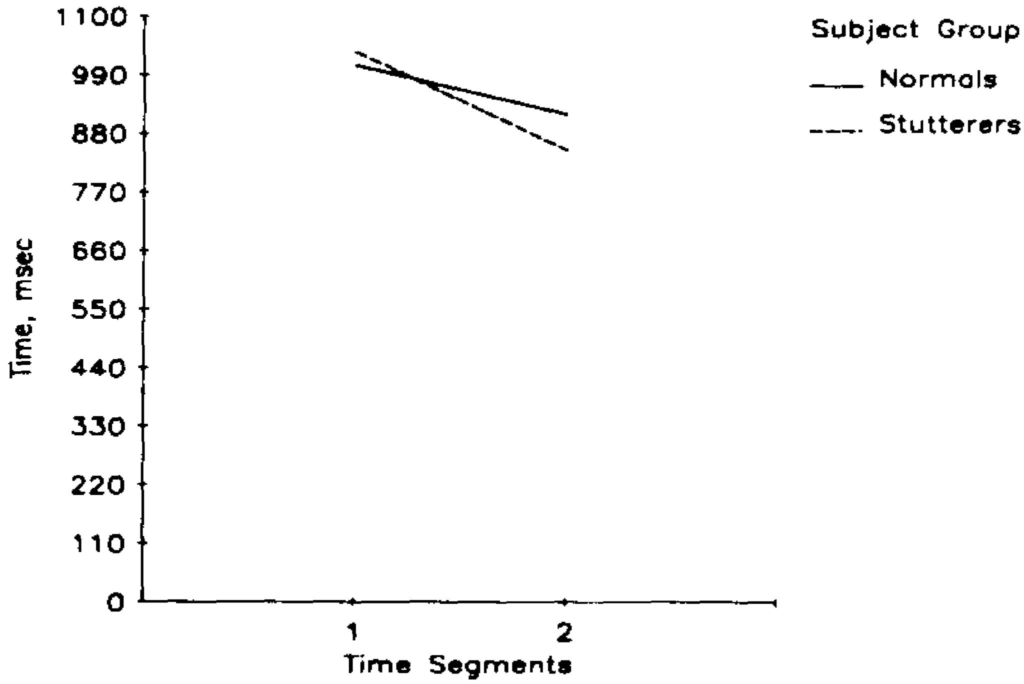
	SD1/SD2
Norm	1.0629
Stut	.8016
t	-1.01

* = sig @ .05 level

<u>/bababa ba ba ba bababa./</u>

The subject groups' averages for each of the two time segments obtained from each subject's production of the reiterative counterpart of <u>Christopher can dunk the basketball.</u>, /bababa ba ba ba bababa./, are shown in Figure 19. The normal subjects produced durtions in a 92 msec. range from 1007 msec. to 915 msec. The stutterers produced durations in a 185 msec. range from

Figure 19. Subject Group Averages
Reiterative Sentence
(Christopher can dunk the basketball.)



1033 msec. to 848 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 29.6$, $df = 1,9$, $p < 0.0004$) and the stuttering group ($F = 25.2$, $df = 1,7$, $p. < 0.0002$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 28.

Table 28 Average intrasubject standard deviations for each subject group and time segment (in msec.) for /bababa ba ba ba bababa./

	Segment 1	2	F
Norm	49	55	.18
Stut	59	54	.15
t	.62	-.08	

* = sig @ .05 level

The normal group varied from 49 msec. to 55 msec. Differences across segments were not statistically reliable. The stutterers varied from 59 msec. to 54 msec. also showing no significant difference in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments obtained from each subject's production of the reiterative counterpart of Christopher can dunk the basketball., /bababa ba ba ba bababa./, were used to form ratios (M1/M2). The expected ratio value was approximately 1.0. The normal group obtained a ratio score of 1.10 and the stuttering group obtained a ratio score of 1.23. Both scores exceeded the expected ratio value of 1.0. The independent t-statistic yielded a significant difference between the two groups ($t = 2.55$, $df = 16$, $p < 0.02$).

The subject groups' averages of intrasubject variability are shown in Table 29. The independent t statistic revealed no significant difference between the two groups.

Table 29 Average intrasubject standard deviations for each subject groups' ratio for /bababa ba ba ba bababa./

	SD1/SD2
Norm	1.0002
Stut	1.2594
t	.63

* = sig @ .05 level

Variable Phonetic Complexity Summary

In summary, comparison of the subject groups for each duration in all variable phonetic complexity patterns and their respective reiterative counterparts via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments for the normal group via repeated measures ANOVA showed significant differences on all variable linguistic sentence patterns and their reiterative counterparts except on the reiterative counterpart for the sentence Bob and Becky ate peanut butter. Comparison across time segments for the stuttering group via repeated measures ANOVA showed no differences on Bob and Becky ate peanut butter. and its reiterative counterpart, significant differences on Barry and Christopher bought candy., but no significant differences on its reiterative counterpart, and significant differences on Christopher can dunk the basketball. and its reiterative counterpart. Significant between group differences in intrasubject variability occurred on the first time segment of the reiterative counterpart of Barry and Christopher bought candy. and on the second time segment of Barry and Christopher bought candy. and its reiterative counterpart. No within group differences in

intrasubject variability were reliable for either group across all time segments for all tasks. Comparison of the subject groups' average ratio scores via t statistics revealed a significant difference for the reiterative counterpart of *Christopher can dunk the basketball*. only. No significant between group differences in intrasubject ratio variability occurred.

Some subjects could not perform the reiterative tasks (See Appendix A - Raw Data).

Formulation of Emphatic Stress

Stuttering children were compared to their nonstuttering peers in their production of a sentence in which specific questions required shifts in emphatic stress (Bob beat Bill again. - fast and slow rates, 'Bob beat Bill again. and Bob 'beat Bill again.). Questions were posed until each group gave ten fluent productions of each rate and stress condition. Syllable durations were measured from one /b/ burst to the next. Thus, there were two durations per task. The mean of each of these durations across repetitions was computed for each subject (M1 and M2). The standard deviations across repetitions of each subject of M1 and M2 were designated SD1 and SD2. These subject group mean syllable durations and their standard deviations were compared via independent group t-statistic. Intrasubject stability was measured within each subject group via repeated measures analyses of variance across the two time segments. The two mean duration intervals per task (M1 and M2) were used to form ratios that could be compared across speaking rate and stress conditions to test the hypothesis of relative time stability.

Bob beat Bill again. (slow rate)

The subject groups' averages of the two time segments obtained from each subject's production of the sentence Bob beat Bill again. (slow rate) are shown in Figure 20. The two durations were expected to be equal in duration. The normal subjects produced durations in a 61 msec. range from 421 msec. to 360 msec. The stutterers produced durations in a 106 msec. range from 452 msec. to 346 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 53.6$, $df = 1,9$, $p < 0.00004$) and the stuttering group ($F = 23.3$, $df = 1,9$, < 0.0009).

The subject groups' averages of intrasubject variability for each time segement are shown in Table 30.

Figure 20. Subject Group Averages
Formulation of Emphatic Stress
(Bob beat Bill, again.) Slow Rate

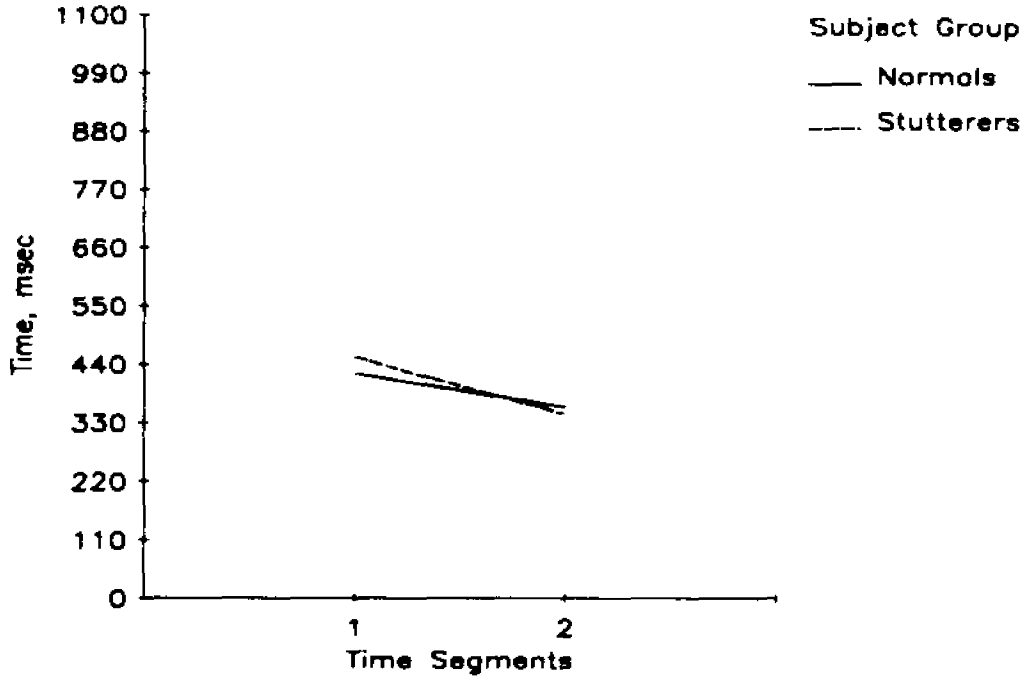


Table 30 Average intrasubject standard deviations for each subject group and time segment (in msec.) for Bob beat Bill again. (slow rate)

	Segment 1	2	F
Norm	53	50	.23
Stut	110	80	2.08
t	1.43	1.07	

* = sig @ .05 level

The normal group varied from 53 msec. to 50 msec. Differences across segments were not statistically reliable. The stutterers varied from 110 msec. to 80 msec. also showing no significant differences in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 20 were used to form ratios (M1/M2). The expected ratio should be near 1.0. The normal group obtained a ratio score of 1.18 and the stuttering group obtained a ratio score of 1.31. Both scores exceeded the expected 1.0 value. The independent t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject ratio variability are shown in Table 31. The independent t statistic revealed a significant difference between the two groups.

Table 31 Average intrasubject standard deviations for each subject groups' ratio for _Bob beat Bill again._ (slow rate)

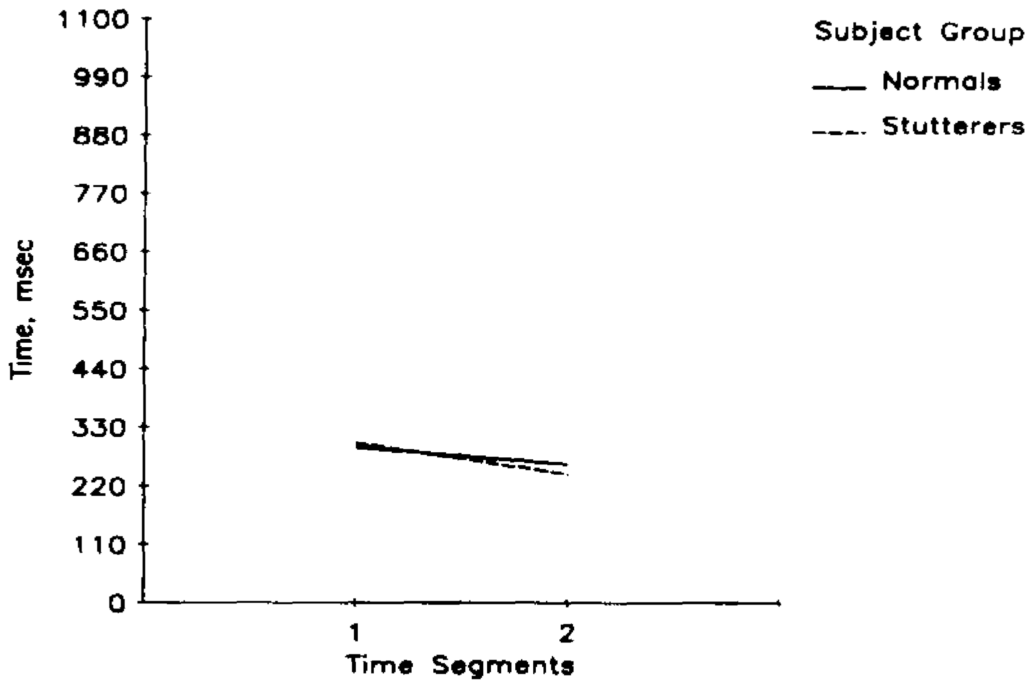
	SD1/SD2
Norm	1.0251
Stut	1.5826
t	2.19*

* = sig @ .05 level

Bob beat Bill again. (fast rate)

The subject groups' averages of the two time segments obtained from each subject's production of the sentence _Bob beat Bill again_. (fast rate) are shown in Figure 21. The two durations were expected to be equal in duration. The normal subjects produced durations in a 32 msec. range from 292 msec. to 260 msec. The stutterers produced durations in a 60 msec. range from 300 msec. to 240 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence.

Figure 21. Subject Group Averages
Formulation of Emphatic Stress
(Bob beat Bill, again.) Fast Rate



Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 22.9$, $df = 1,9$, $p < 0.001$) and the stuttering group ($F = 26$, $df = 1,9$, $p < 0.0007$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 32.

Table 32 Average intrasubject standard deviations for each subject group and time segment (in msec.) for Bob beat Bill again. (fast rate)

	Segment 1	2	F
Norm	37	34	1.10
Stut	73	52	10.45*
t	1.83	1.22	

* = sig @ .05 level

The normal group varied from 37 msec. to 34 msec. Differences across segments were not statistically reliable. The stutterers varied from 73 msec. to 52 msec. showing a significant difference in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages of the two time segments shown in Figure 21 were used to form ratios (M1/M2). The expected ratio should be near 1.0. The

normal group obtained a ratio score of 1.13 and the stuttering group obtained a ratio score of 1.28. Both durations exceeded expected 1.0 value. The independent t-statistic yielded a significant difference between the two groups ($t = 2.12$, $df = 18$, $p < 0.05$).

The subject groups' averages of intrasubject ratio variability are shown in Table 22. The independent t statistic revealed a significant difference between the two groups.

Table 33 Average intrasubject standard deviations for each subject groups' ratio for Bob beat Bill again. (fast rate)

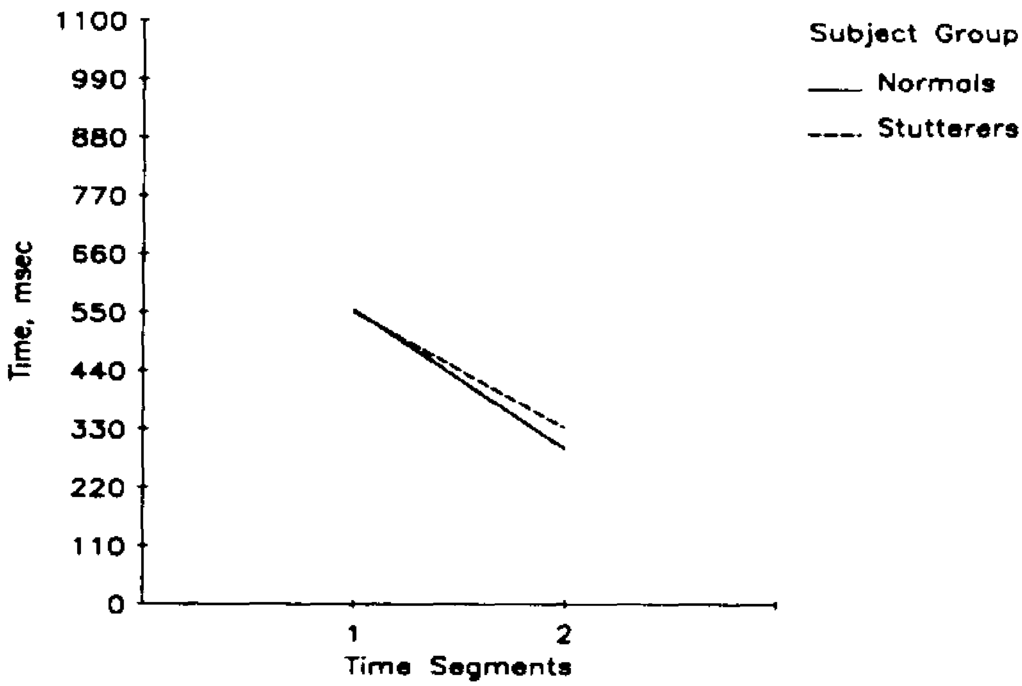
	SD1/SD2
Norm	1.0833
Stut	1.4181
t	2.07*

* = sig @ .05 level

'Bob beat Bill again.

The subject groups' averages for each of the two time segments obtained from each subject's production of the sentence 'Bob beat Bill again. are shown in Figure 22. The duration of the unstressed syllable should be less than the duration of the stressed syllable. The

Figure 22. Subject Group Averages
Formulation of Emphatic Stress
('Bob beat Bill, again.)



normal subjects produced durations in a 262 msec. range from 554 msec. to 292 msec. The stutterers produced durations in a 220 msec. range from 550 msec. to 330 msec. Comparison of the subject groups for each duration via t statistics revealed no significant differences at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences for the normal group ($F = 49.6$, $df = 1,9$, $p < 0.00006$) and significant differences for the stuttering group ($F = 32.5$, $df = 1.9$, $p < 0.0003$).

The subject groups' averages of intrasubject variability for each time segment are shown in Table 34.

Table 34 Average intrasubject standard deviations for each subject group and time segment (in msec.) for _'Bob beat Bill again._

	Segment 1	2	F
Norm	101	34	7.09*
Stut	125	78	5.76*
t	.60	1.62	

* = sig @ .05 level

The normal group varied from 101 msec. to 34 msec. Differences across segments were statistically reliable. The stutterers varied from 125 msec. to 78 msec. also showing a significant difference in intrasubject

variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 22 were used to form ratios (M1/M2). The expected ratio was greater than 1.0. The normal group obtained a ratio score of 1.95 and the stuttering group obtained a ratio score of 1.71. Both scores attained the expected greater than 1.0 msec. value. The independent t statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject ratio variability are shown in Table 35. The independent t statistic revealed no significant differences between the two groups.

Table 35 Average intrasubject standard deviations for each subject group and time segment ratio for 'Bob beat Bill again.

	SD1/SD2
Norm	2.9075
Stut	2.3925
t	-.73

* = sig @ .05 level

Bob 'beat Bill again.

The subject groups' averages for each of the two time segments obtained from each subject's production of Bob 'beat Bill again. are shown in Figure 23. The normal subjects produced durations in an 8 msec. range from 411 msec. to 419 msec. The stutterers produced durations in a 51 msec. range from 528 msec. to 477 msec. Comparison of the subject groups for each duration via t statistics revealed a significant difference for time segment 1 but no significant difference for time segment 2 at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed no significant differences for either group.

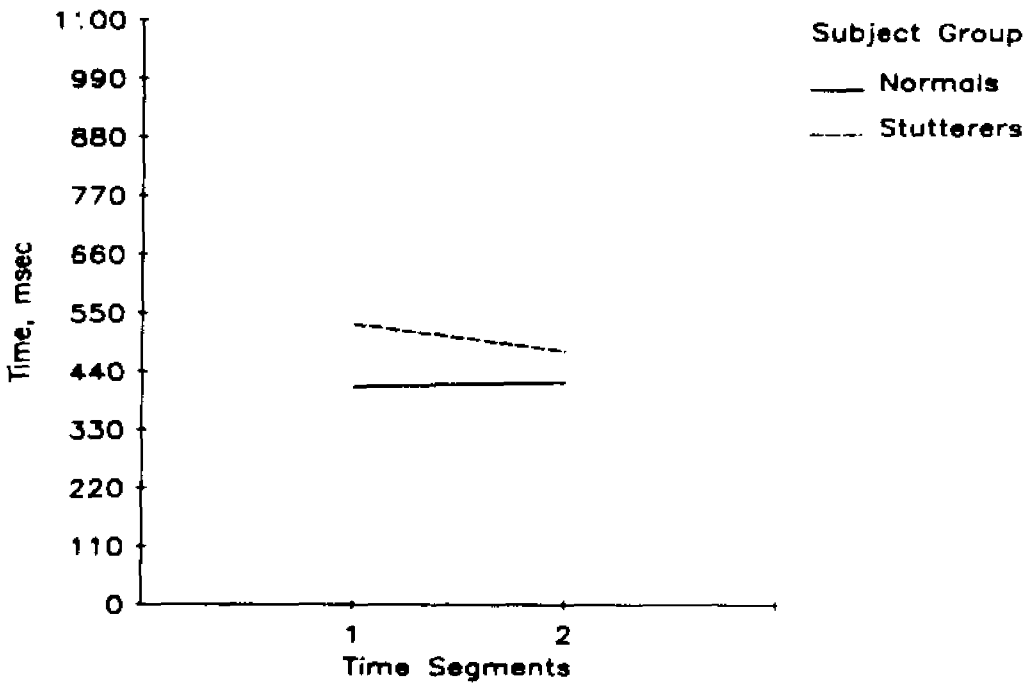
The subject groups' averages of intrasubject variability for each time segment are shown in Table 36.

Table 36 Average intrasubject standard deviations for each subject group and time segment (in msec.) for Bob 'beat Bill again.

	Segment 1	2	F
Norm	46	79	10.86*
Stut	390	133	0.82
t	1.27	1.60	

* = sig @ .05 level

Figure 23. Subject Group Averages
Formulation of Emphatic Stress
(Bob 'beat Bill, again.)



The normal group varied from 46 msec. to 79 msec. Differences across segments were statistically reliable. The stutterers varied from 390 msec. to 133 msec. showing no significant difference in intrasubject variability. The two groups did not show between group variability at either time segment.

The subject groups' averages for the two time segments shown in Figure 23 were used to form ratios (M1/M2). The ratio of the unstressed/stressed condition should be fractional. The normal group obtained a ratio score of 1.0 and the stuttering group obtained a ratio score of 1.2. Neither group achieved the expected fractional value. The independent t-statistic revealed no significant difference between the two groups.

The subject groups' averages of intrasubject ratio variability are shown in Table 37. The independent t statistic revealed no significant differences between the two groups.

Table 37 Average intrasubject standard deviations for each subject groups' ratio for Bob 'beat Bill again.

	SD1/SD2
Norm	.6180
Stut	12.6443
t	1.03

* = sig @ .05 level

Formulation of Emphatic Stress Summary

In summary, comparison of the subject groups for each duration in all formulation of emphatic stress tasks via t statistics revealed one significant difference on time segment 1 on the Bob 'beat Bill again. task at the .05 level of confidence. Comparison across time segments via repeated measures ANOVA showed significant differences on all tasks except the Bob 'beat Bill again. task for both groups. No significant between group differences in intrasubject variability occurred on either rate or stress tasks. Within group differences in intrasubject variability across time segments on the slow task were not statistically reliable for either group. Within group differences in intrasubject variability across time segments on the

fast tasks were statisticallly reliable for the stuttering group only. Within group differences in intrasubject reliability on the stress tasks were significantly reliable on both tasks for the normal group but only on the 'Bob beat Bill again. task for the stuttering group. Comparison of the subject groups' average ratio scores via t statistics revealed significant differences on the fast task only at the .05 level of confidence. Significant between group differences in intrasubject ratio variability occurred on both rate tasks.

Discussion

The conclusions of this study of stuttering and nonstuttering children's articulatory timing abilities as measured by duration differences are discussed within the framework of rate, stress, and phonetic complexity as internal and external timing sources were changed. In addition, comparison of their relative timing abilities are made. Theoretical explanations of the results are included as are recommendations for future studies comparing the fluent and dysfluent speech of stutterers.

Rate

Slowing rate in stutterers has generally been accepted as a special condition which reduced or eliminated stuttering and has long been a tool in fluency therapy (Andrews et al, 1982). This study evaluated the effect of rate on timing differences between stutterers and nonstutterers by providing tasks in which the timing was set by three sources: 1) an outside source (a metronome), 2) a delayed imitation source (a tape recorded digitized live voice) and 3) a

formulation of timing source (questions posed via a language master). Fluent utterances were evaluated.

Metronome Rhythmicity (ba 60bpm vs ba 80bpm)

Previous exploration of speech acts in which the timing was set for the stutterer included such tasks as singing, choral reading, and shadowing. It is an accepted fact that such tasks decrease or eliminate stuttering (Adams, 1984). Stimulus items in this study were devised so that a metronome pace set the rate and equal stress was placed on all syllables. Syllable duration was set by the speaker within the limits of the metronome pace. No formulation was necessary other than to repeat the designated syllable trains, thus the task assessed a low level "auditory - to - motor planning" ability. The complication of reaction time differences noted by previous researchers [Brayton and Conture, 1978; Hayden, Jordahl and Adams (1982 a, 1982 b)] were minimized by allowing the subjects to enter into production on their own accord with unlimited trials until ten fluent productions were obtained.

The stuttering group as a whole subjectively had more difficulty mastering the tasks and it is recognized that adaptation probably occurred through repeated practice of the task resulting in improved coordination

of the respiratory, phonatory, and articulatory systems (Brutten and Shoemaker, 1967; Eisenson, 1958; Wingate, 1966). Consequently the comparisons between the two groups were made considering the stuttering group's best possible production on each task.

There were no significant differences between stutterers and their nonstuttering peers in their ability to control stressed syllable durations, however, the following trends were evidenced.

Normals were consistently nearer the metronome pace as indicated by mean syllable durations nearer 1000 msec. (ba syllable train at 60 bpm) or 750 msec. (ba syllable train at 80 bpm) for slow and fast rate productions respectively. Stutterers consistently anticipated the metronome pace as indicated by below target durations which were shorter in comparison to those durations produced by the normal group. At the slow rate, both groups produced shorter syllables initially as indicated by below target durations, leveled off during the task to what was their "characteristic" duration and then returned to shorter syllable durations. At the fast rate, normals produced durations longer than the expected 750 msec. target. Stutterers on the other hand were below the 750 msec. target. Their initial response showed greater anticipation of the metronome beat, leveling off during

the task to a "characteristic" syllable duration very near target, and then anticipation of the metronome beat on the final syllable duration as they had initially.

Significant differences in intrasubject variability occurred on syllable durations two and three for the slow rate. Upon examination of Figure 1, it appears that the significant differences are between the "characteristic" syllable durations or leveling off periods of the two groups. No significant differences occurred on initial syllable durations where normals gave anticipatory responses nor on final syllable durations where normals were probably anticipating the end of the task. It is important to note at this point that significant between group variability emerged during the slow rate task as opposed to the fast rate task.

Surprisingly, the stuttering group subjectively had more difficulty with the slower task in this study although previous research has reported an increase in fluency among stutterers being attributed to one or more key prosodic variables, including rate reduction (Ramig, 1984). These results show that stutterers were less in control at the slow rate or that the rate used in the study was abnormally slow.

The 60 bpm metronome rate is equivalent to the 60 word per minute rate used by Adams, Lewis, and Besozzi

(1973) which resulted in a significant decrease in stuttering. Reading in this manner was reported to encourage cessation of articulatory movements following the production of each word. Another study which used metronome beat stimulation with a 90 bpm stimulus to train stutterers to use "syllable timed speech" found a 91% decrease in stuttering was reported (Andrews, Howie, Dozsa and Guitar, 1982). Although the present study used a metronome pace to time spontaneously produced nonsense syllables, it may be noted that when comparing the 60 bpm pace (Adams et al., 1973) with the 90 bpm pace (Andrews et al., 1982) and the 60 bpm vs 80 bpm pace in the present study, it appears that rate can possibly be too slow.

Slow rate of speech is used in therapy, not only because it reduces the frequency of stuttering but theoretically because it is thought to allow subjects to have more time to plan or update the underlying sensory-motor model (Andrews et al, 1983). In addition, a reduced rate of articulatory movement is thought to facilitate the coordination of vocalization and articulation and thus results in fluency (Adams and Reis, 1971; 1974; Agnello, 1975; Perkins, Rudas, Johnson, and Bell, 1976). Subjects in this study were given time between utterances to plan their responses and their dysfluent utterances were excluded from

evaluation. Even so, a difference was found on the slow rate task which points to the probability that a rate range exists for each stutterer whereby he is below normal limits in his ability to perform at rates that are either too fast or too slow. Future studies should quantitatively assess the number of trials needed to produce the required number of fluent samples at each rate.

Slowing rate to a certain extent allows for more planning time between utterances but perhaps, as in other physical activities, there is a point at which too much reduction in rate interferes with the "rhythm" of the activity and the activity becomes a sequence of events. This can be likened to the presentation of material for reading so slowly that single words rather than sentences are read with resulting increase in fluency (Adams et al., 1973). The stutterer, perhaps, fluently produces single word utterances, not sentences. An integral part of therapy strategies has been to control for length and complexity of the utterance as well as rate. In the present study, complexity was minimal and the length of utterance was a string of cv syllables. Perhaps at the 60 bpm rate for the stutterers, each syllable became a new utterance as

compared to the 80 bpm rate where the string of syllables remained a syntagm as planned by the researcher. This would explain the differences between the two groups reported below.

Repeated measures analyses of variance were completed and indicated a significant difference in the mean syllable duration for the normal group during the slow rate task. Figure 1 shows the initial and final syllable durations to be at odds with the "characteristic" syllable durations of the middle portion of the utterance. Although the stuttering group shows the same pattern for the initial, middle and final syllables on the slow rate task as compared to their normal peers, there were no significant differences in their mean syllable durations. Their initial and final syllables were not so different from their middle syllables - all responses were anticipatory in nature. Neither group showed significant differences in the mean syllable duration during the fast rate task.

The normal group was very consistent in its' response to the metronome pace by repeatedly producing syllables of like durations during the slow rate task. The stuttering group however was very inconsistent at first with its greatest intrasubject standard deviation on the initial syllable and a trend to show less variability as the task progressed. These differences

could be explained by the proposition that in actuality the normal group was performing a task of minimal complexity but greater length in comparison to the stuttering group's task. If the stutterers were actually producing individual or shorter strings of syllables, there would be a need to formulate a timing program each time thus interrupting their output process as suggested by Cooper and Allen (1977). There were no significant within group intrasubject standard deviations at the fast rate. Stutterers and normal were both consistent in their production of the stressed syllable duration at the faster rate.

The results of this set of tasks showed statistically that stuttering children do control stressed syllable durations in a manner similar to their normal peers in response to a slow or fast metronome beat, but questioned whether or not the intended task was actually accomplished by the stuttering children. Using an external source of timing appears to be a task which allows stutterers to perform for the most part statistically within normal limits at both fast and slow rates. Minor differences are noted in trends of consistent anticipation of the metronome beat by stutterers and "greater" but not usually significant variability between the two groups. Within group comparisons showed that normals consistently gave

initial and final anticipatory reponses. Stutterers improved their consistency as the slow task progressed and responded with consistency throughout the fast task. Results indicated that requiring stutterers to slow rate could actually cause timing problems if the rate is "too slow" or could actually change the intended task. Inherent in this statement is the probability of differences from stutterer to stutterer concerning whether or not rate is "too slow." Rather than indicating simply a "subgroup" of stutterers whose timing abilities are different from that of their normal peers, this supports "individual" timing mechanisms from stutterer to stutterer with the mean of the group being different, but not significantly different from that of the normal group.

Therapy strategies which concentrate upon slowed speech must effectively deal with the stutterer's tendency to have their most variable motor performance at the beginning of an utterance. It is at this point that the stutterer may show inconsistencies in interarticulator coordination (Alfonso, P., personal communication, February 22, 1988). Slowed rate alone, or imposition of an outside timing source are apparently not enough support to overcome this disability. Clinically effective programs of rate management have also emphasized smoothness of articulatory onsets and

continuous glottal air flow as well (Andrews et al., 1983). Selective use of a slowed rate with conscious attention to articulator movement patterns have long been used as strategies for "pulling out" of disfluencies (Van Riper, 1971) and maintaining fluent, slowed speech (Perkins et al., 1976).

Delayed Imitation of Rate Change

A second low level "auditory - to - motor planning" task involved an added degree of difficulty in that the subject's response was delayed. Rather than knowing the rate he was about to produce, the subject listened for and imitated a fast rate or slow rate nonsense syllable train presented via a tape recorder. It may be noted that the slow rate in this task was "faster" than the fast rate in the metronome task. Adaptation and reaction time complications were minimized as in the metronome task.

There were again no significant differences between the stuttering group and their nonstuttering peers in their ability to imitate stressed syllable durations at fast and slow rates. Subjectively, this set of tasks was easily accomplished by both groups. Apparently the rates chosen in this portion of the study were within the timing abilities of both groups. These results were

similar to those obtained by Hanna and Morris (1977) whereby setting a metronome pace at 25% above basal reading rate, at basal reading rate and 50% below basal reading rate yielded similar results in reference to the stutterers's performance (65% less stuttering). This task involved stimuli of minimal complexity and a shorter syntagm length than the metronome task. Apparently both rates allowed for reasonable demands on motor planning (Frick,1965) given the difficulty of the task. As the difficulty of the task increases or varies more, it can be expected that the potential for stuttering increases (Blood and Hood, 1978) and therefore rate of speech would become more critical as phonetic complexity increased.

Visual inspection of Figure 6 showed the stuttering group was below target on the slow task of the expected 500 msec. syllable duration for syllable one as compared to their on target normal peers. Both groups were slightly above the expected 500 msec. duration for syllable two. Between group variability shown in Table 6 depicts more consistent production for the normal group as compared to the stuttering group, especially for syllable one.

Visual inspection of Figure 7 showed the normal group to be above target on the fast task of the expected 333 msec. syllable duration for syllables one

and two. The stuttering group, however, fell short of the target on syllable one and exceeded the target on syllable two. Between group variability shown in Table 7 again depicts more consistent production for the normal group as compared to the stuttering group.

A pattern of greater consistency on the part of the normal group continued. Repeated measures analyses of variance were computed and indicated a significant difference in the mean syllable durations for the stuttering group during both the slow and fast rate tasks although syllables one and two of equal duration were presented for reproduction. The opposite was true for the normal group. Normals produced syllables of almost equal length whereas their stuttering peers varied their syllable lengths, regardless of the task rate.

The results of this set of tasks showed that stuttering children do control stressed syllable durations in a manner similar to their normal peers in response to a nonsense syllable train. Using a delayed imitation source appeared to be a task which allowed stutterers to perform statistically within normal limits at both fast and slow rates. The trend for stutterers to show greater variability, especially on the initial syllable, continued. Within group comparisons showed that normals were consistent in their production of

syllable length, although they produced longer syllables at the faster rate than the tape recorded model presented to them. Stutterers produced a shorter syllable one and a longer syllable two which were statistically different in duration from one another at both the fast and slow rate. Stutterers again showed greater variability from syllable one to syllable two although this was significant at the slow rate only. It was noted that two of the three significant within group differences found were on the "slow" rate which as stated previously was faster than the "fast" rate task for the metronome rhythmicity tasks. This again supports a theory of "individual" timing mechanisms from stutterer to stutterer.

Formulation of Rate Change

The third task involved rate change involved formulation of timing for the sentence /Bob beat Bill again./. The subject responded at his own "slow" rate or "fast" rate in response to the rate at which the question "What happened?" was presented.

There were again no significant differences between the stuttering group and their nonstuttering peers in their ability to control stressed syllable durations in

a manner similar to their normal peers in production of a sentence in which specific questions required different rate responses.

There were no "expected" values as each subject formulated his own "slow" and "fast" rates. Subjects relied on their own timing abilities. Formulation of rate with a phonetically more complex utterance was expected to reveal more differences between the groups in comparison to the previous rate tasks (Brown and Moren, 1942; Wingate, 1967.) The lack of significant differences indicated that the task was not beyond the critical length of both groups in terms of the number of speech segments they were able to program as a syntagm (Cooper and Allen, 1977; Kozhevnikov and Chistovich, 1965.)

Visual inspection of Figures 20 and 21 revealed that normals produced shorter first syllables in comparison to their stuttering peers and longer second syllables in comparison to their stuttering peers. There was no significant between group variability for syllable one or syllable two.

Within group differences were significant for both groups. Normals and stutterers produced syllable one durations significantly different from syllable two durations at both slow and fast rates, although the task was supposedly an equal or no stress task. Normals

produced syllables closer in duration but still significantly different as compared to their stuttering peers. Normals showed about the same level of standard deviation on syllables one and two whereas their stuttering peers showed greater standard deviation on syllable one as compared to syllable two for both the fast and slow rates. There was a significant difference for the fast rate.

The results of this set of tasks showed that stuttering children do control stressed syllable durations in a manner similar to their normal peers in production of a sentence in which specific questions required different rate responses. Normals came closer to formulating syllables of equal length at both the fast and slow rates. The trend for stutterers to show greater variability, especially on syllable one continued. Formulation of timing appeared to be a task at which stutterers, as a group, performed statistically as well as their normal peers. Each group's own internal view of "slow" and "fast" was "normal." The within group variability showed that individuals' views of "slow" and "fast" were significantly different from one another indicating that as one progresses from one syllable to the next duration minor changes occur on an individual basis. This is calls to mind the statement that listeners most often identified slow rate and

abnormal speech cadence or rhythm as the cues which perceptually separated a stutterer's fluent speech from normally fluent speech (Hamre, 1984). Rate was perceived as "slow" and "fast" but the duration of each syllable was the factor that caused the subjects within each group to be statistically different from one another. Perhaps it is the duration of each syllable in relation to the duration of others that signals fluency to the listener.

While this task involves more phonetic complexity than the previous tasks, it may well have been performed at a low-level of language processing. The subjects were not accessing novel word forms or sentence structures once the task had been practiced. Having computed a motor program for the basic sentence, the task became one of reproducing that pattern. The failures of the stuttering subjects again appear to be related to an onset phenomenon in which the initial articulatory gestures may be at fault.

Stress

Conflicting results have been reported concerning the relationship between stress and stuttering. Wingate (1979, 1984) identified linguistic stress as the point

of breakdown for stutterers whereas Weiner (1984) identified the loci of stuttering as strongly associated with initiation of phonation on either stressed or unstressed syllables. This study evaluated the effect of stress on timing differences between stutterers and nonstutterers by providing tasks in which the timing was set by two sources: 1) a delayed imitation source (a tape recorded digitized live voice) and 2) a formulation of timing source (questions posed via a language master). Fluent utterances were evaluated.

Delayed Imitation of Stress Patterns

The subjects listened for and imitated a stressed-unstressed or an unstressed-stressed nonsense syllable train. Ample time was given between presentations to allow subjects to respond when ready.

There were no significant differences between the stuttering group and their nonstuttering peers in their ability to imitate stressed-unstressed and unstressed-stressed syllable durations.

Wingate (1976) suggested that a major motivation for slowing down was to allow focus on speech prosody. St. Louis (1979) reformulated Wingate's progressing theory and described stuttering in terms of a defect in prosody pertaining specifically to a defect in

transition to stressed syllables. After further research, Wingate (1984) strongly suggested that stuttering is tied to syllable production, especially vowel production in stressed syllables. This task required that the subjects imitate two stress patterns with minimally complex nonsense syllables.

Visual inspection of Figures 8 and 9 indicated that both groups were able to complete the assigned tasks. The model presented stressed syllables 500 msec. in duration and unstressed syllables 333 msec. in duration. On the stressed-unstressed task, the normal group was closer to the stressed syllable target duration of 500 msec. whereas the opposite was true for the unstressed syllable duration of 333 msec. in that the stuttering group was closer to target duration. On the unstressed-stressed task, both groups shortened the unstressed syllable and the stuttering group more closely approximated the target duration of the stressed syllables. Between group variability shown in Tables 10 and 12 again showed the trend for more consistency within the normal group. The stuttering group showed greater variability on the stressed syllables as did the normals but the normals did so to a lesser degree. This is weak support of the theory that stuttering is associated with linguistic stress (Brown, 1938; Hahn, 1942; and Wingate, 1984. Although the task was

phonetically simple and rate was within the limits of the stuttering group's capabilities, introduction of stress resulted in greater variability for the stuttering group.

Repeated measures analyses of variance were computed and indicated that stress differences were made by both groups through use of duration differences. Average intrasubject variability of the normal group on both tasks showed that individuals expressed stress through use of his "duration" which fell within an acceptable "normal" range. The stuttering group followed their pattern of individual duration preference on the stressed-unstressed task but not on the unstressed-stressed task. Some other means in addition to duration was used to signify stress on the unstressed-stressed task.

The results of this set of tasks showed that stuttering children do control stressed and unstressed syllable durations in a manner similar to their normal peers in response to a nonsense syllable train. Again, use of a delayed imitation source appeared to be a task which allowed stutterers to perform statistically within normal limits when imitating stressed-unstressed and unstressed-stressed nonsense syllable trains. The trend for stutterers to show greater variability, especially on the stressed syllables, is important to note. Within

group comparisons showed that normals used greater duration to signify stress when stress was on the initial syllable. Both groups shortened the stressed syllable when it was not in the initial syllable of the utterance. Normals always used duration to a significant degree to indicate stress whereas stutterers did so only when the stressed syllable was in the initial position. Results indicated that both stutterers and their normal peers fall within an "acceptable" limit when using duration to indicate stress. The difference apparently is not in actual duration but perhaps in the relationship of one duration to other durations within the utterance.

The present study's focus upon durational measures ignores the possibility that stutterers are more variable in their coordination of stress cues. Measurement of changes in fundamental frequency, intensity, and articulatory precision through formant structure may reveal that stutterers are more variable than normals in their representation of stress. While a particular normal speaker may adopt a standard approach to stress representation using these cues, stutterers may use a variety of cue constellations, resulting in less control of any one cue.

Formulation of Stress Patterns

The subjects listened to questions and responded with appropriate shifts of emphatic stress. This task required that the subjects formulate the stress pattern only - the linguistic content for both stress patterns was identical. Two stress patterns were produced and were identical to the stress patterns of the nonsense syllable tasks previously discussed. Ample time was given between presentations to allow subjects to respond when ready.

There was a significant difference between the stuttering group and the normal group on production of the unstressed-stressed task but no significant difference between the two groups on the stressed-unstressed task.

In a similarly designed experiment, Bergmann (1986) pointed out that a prosodic disturbance did not rule out the stutterer's ability to produce sentence stress. In this study, the stuttering group perceptively produced the appropriate stress pattern in response to a question. Bergmann found more stuttering at sentence-accent locations when stutterers produced phonetically reliable sentences in response to questions requiring stress shifts. This study found a significant difference in duration production on only one of two

stress patterns although phonetic structure was identical, but is supportive of Bergmann's conclusions that execution of sentence accent is motorically a more difficult task for the stutterer as compared to their nonstuttering peers.

Visual inspection of Figure 22 revealed that both groups used duration to signify stress in the stressed-unstressed condition. There was no target duration on these tasks. The normal group produced a longer stressed syllable duration on the stressed-unstressed task as compared to the stuttering group and the opposite was true on the unstressed-stressed task. The normal group produced a shorter unstressed syllable duration on both tasks. The stuttering group showed greater variability on both tasks, especially for the initial syllable.

Repeated measures analyses of variance results indicated that both groups showed significant within group differences on the stressed-unstressed task. Visual inspection of Figures 22 and 23 showed again that each subject had a preference for signifying stress through "individual" duration and/or loudness measures which fell within acceptable limits as was indicated by significant average intrasubject variation. The normal group produced a greater duration difference to signify stress between the stressed and unstressed syllables as

compared to their stuttering peers. The trend for greater average intrasubject variability by the stuttering group, especially on syllable one, continued. Repeated measures analyses of variance results indicated that both groups showed no significant within group differences on the unstressed-stressed task. Visual inspection of Figure 23 revealed that on the unstressed-stressed task, the normal group had a minimal duration difference between the durations of the stressed syllable and the unstressed syllable, with the stressed syllable being only 7 msec. longer. The stuttering group actually had a longer unstressed syllable in the unstressed-stressed task. Evaluation of the auditory signal during the data collection process indicated that appropriate stress was used on those responses measured and therefore it is apparent that both groups signified stress through loudness in those cases where no duration differences between stressed and unstressed syllables were found.

The results of these set of tasks indicated that stuttering children do not control stressed and unstressed syllable durations in a manner similar to their normal peers in production of a sentence in which specific questions would require shifts in emphatic stress. Formulation of stress is a task involving more than duration differences for both stutterers and their

normal peers. The introduction of phonetic complexity to the unstressed-stressed pattern may have been the factor which accounted for the significant difference between the two groups. Simple duration measurements cannot be the sole means of identifying group differences. In addition, on the basis of the results of the rate and stress tasks in this study, it is believed that stutterers left free to set their own rate will begin to encounter problems when timing syllable durations as the complexity of sentence stress increases.

Stutterers' inability to control stress patterns is typically addressed in fluency-control treatment programs, even those programs which specifically target rate control. For example, Perkins et al. (1976) requires even at the slowest training rates, that stress patterns and fundamental frequency contours be approximately controlled. The synergistic nature of rate and stress control in such programs is reinforced by this study's findings.

Phonetic Complexity

As children are developing speech and language, they produce utterances of greater complexity and their task is to choose to obey articulatory constraints

versus temporal constraints (Tingley and Allen, 1975). Children by age 11 have reached the adult model of speech production and are governed essentially by temporal constraints as is the adult system (Branigan, 1979, Ohala, 1970). Increasing phonetic complexity would stress an individual's timing system, especially for the stutterer who is said to be a less accurate timer than his normal peer (Cooper and Allen, 1977). This study evaluated timing differences between stutterers and their nonstuttering peers as they produced utterances of varying phonetic complexity by providing tasks in which the timing was set by 1) an outside source (a metronome) and 2) a delayed imitation source (language master recordings).

Metronome Rhythmicity (/bæd,bræd, bæd bræd/ 60 bpm)

The metronome pace of 60 bpm set the rate in this task and equal stress was placed on all syllables. Syllable duration was set by the speaker within the limits of the metronome pace. No formulation was necessary other than to repeat the designated syllable trains thus the task assessed a low level "auditory- to - motor planning" ability. Adaptation and reaction time concerns have been explained previously.

There were no significant differences between stutterers and their nonstuttering peers in their ability to control stressed syllable durations of increasing phonetic complexity in response to a slow (60 bpm) metronome beat. However, trends similar to those noted in the previous metronome rhythmicity tasks were evidenced and support Healey and Adams (1981b) suggestion that more disparities will occur as the complexity of the utterance increases. A possible explanation for the trend was suggested by Cooper and Allen (1977) who postulated that stutterers' timing programs were perhaps unstable resulting in variation in the durations specified from one repetition to the next.

Visual inspection of Figures 3 /bæd/ and 4 /bræd/ showed that both groups produced shorter initial syllable durations, produced "characteristic" syllable durations for syllables 2, 3, and 4 and then produced a syllable 5 that was shorter than syllable 4. Again, between group variability, shown in Tables 3 and 4 indicated more consistency for the normal group. It appears that both groups were performing the intended task. Greater variability on the part of the stuttering group is perhaps an indication that either the metronome rate was too fast for the degree of phonetic complexity or repetition of more phonetically complex stressed syllables is motorically more difficult for the

stutterer to maintain consistently. Visual inspection of Figure 5 /bæd bræd/ showed that both groups produced shorter syllable durations for /bæd/ as compared to /bræd/. Again, with one exception, the stuttering group produced slightly shorter syllables than the normal group. Between group variability again indicated greater consistency on the part of the normal group on all syllables. The stuttering group appears to be less able to produce stressed syllables which alternately become less and then more complex. This task more closely simulated changing phonetic complexity which occurs in general conversational speech and required use of more complex timing skills.

Repeated measures analyses of variance results indicated that the normal group produced syllables that were significantly different from one another on all three tasks. For the /bæd/ syllable train task, the normal group produced an initial syllable that was much shorter in duration in comparison to syllables 2 through 5 which explained the significant results. The same pattern was true for the stuttering group but to a lesser duration difference degree and therefore no significant within group differences were found for that group. For the /bræd/ syllable train task, the normal group again produced a much shorter initial syllable followed by syllables more equal in duration. The

stuttering group also produced a much shorter initial syllable and gradually increased each syllable's duration through syllable 4, which was longer than the target duration and then produced a shorter syllable 5. All syllables produced by the stuttering group contributed to the significant within group differences whereas only the initial syllable contributed to the significant difference for the normal group. Stutterers have more difficulty maintaining consistency of production of stress at this rate and level of phonetic complexity. On the final task, /bæd bræd/, both groups produced /bæd/ syllables of consistent duration and /bræd/ syllables of consistent duration and therefore the significant differences were attributed to the phonetic differences.

Average intrasubject variation again revealed a trend for stutterers to be more variable from syllable to syllable than their nonstuttering peers. There were no significant average intrasubject variation for the normal group. The stuttering group showed gradual average intrasubject variation improvement from syllable 1 to syllable 5 for the /bæd/ syllable train task and had no significant difference from syllable to syllable. On the other two phonetic complexity tasks, /bræd/ and

/bæd bræd/ syllable trains, the initial syllable was the site of greatest average intrasubject variability and thus the reason for significant differences.

The results of this set of tasks showed that stuttering children do control stressed syllable durations of increasing phonetic complexity in a manner similar to their normal peers in response to a slow (60 bpm) metronome beat. The trend for stutterers to produce syllables of slightly shorter duration continued throughout these three tasks. Use of the metronome as an outside source of timing again allowed them to perform within normal limits. Addition of phonetically more complex tasks revealed more significant between group variation and also more significant within group differences as compared to the previous metronome tasks. Normals again subjectively learned the tasks more quickly and responded with greater consistency as compared to their stuttering peers who seemed to lag behind just slightly in their ability to learn the task and consistently produce the given syllable. Inspection of the figures concerning each of the phonetic tasks revealed that increasing phonetic complexity on stressed syllables was a means of showing minimal differences

between the two groups, especially in how they responded over time.

The difficulties demonstrated by the stuttering children in this task support Van Riper's (1971) theoretical position that a core element of stuttering resides in coarticulatory processes. Normal speakers are able to more closely approximate a single syllable duration in production of clustered and unclustered syllables by anticipating lingual gestures for the /r/ during production of the /b/ segment. The stutterers' disability in this regard is emphasized in the speeded condition in which this overlapping of gestures must be accomplished more rapidly. This task, more than the others, points to the possibility of decreased interarticulator coordination on the part of the stutterer. Van Riper's therapy techniques relate to this inability by requiring that the stutterer introspect where in space articulators should be for production of speech sounds as an aid for pulling out of disfluencies.

Delayed Imitation of Increasing Phonetic Complexity

The subjects listened for and imitated words expanded through clustering and suffixing couched in a carrier phrase. They also imitated three sentences of

equal syllable length but variable linguistic patterns and their phonetically less complex reiterative counterparts which were of equal syllable length but identical phonetic complexity.

Clusters and Suffixes

There were no significant differences between the stuttering group and their nonstuttering peers in their ability to imitate words expanded through clustering and suffixing as measured by /s/ duration and base word duration respectively.

Visual inspection of Figures 10 through 13 indicated that both groups reduced /s/ duration and base word duration as cluster length and suffix length increased which is in agreement with the results reported by Hawkins (1973) and Lehiste (1971). Between group variability shown in Tables 14 through 17 indicated a trend for more consistency within the normal group in 10 of 13 clustering and suffixing utterances. However, the stuttering group exhibited increasing variability on the cluster task as the cluster increased but the opposite was true for normals. This increase in complexity of the cluster was intra-syllabic as compared to the suffixing task in which an increase in complexity was extra-syllabic through increase in

syllables per word. Variability on the suffixing task was consistent between the two groups in terms of direction. Healey and Adams (1981b) recognized this task dependency in relationship to promoting fluency.

The results of this set of tasks showed that stuttering children do control intrasyllable durations in a manner similar to their normal peers in response to expansion due to clustering and suffixing (a motor task with phonetic complication). Again, use of a delayed imitation source appeared to be a task which allowed stutterers to perform statistically within normal limits when imitating the clustering and suffixing tasks, but with a trend for more within group variability.

In as much as the stuttering children were more variable in cluster productions, all of which were word-initial, interarticulator control is again implicated. Their relatively good control of duration as syllables are added shows that their overall timing of an utterance may be adequate.

Variable Linguistic Patterns and Reiterative Patterns

There were no significant differences between the stuttering group and their nonstuttering peers in their ability to imitate sentences of variable linguistic patterns and their reiterative counterparts.

Visual inspection of Figures 14 through 19 revealed a trend for both groups to produce accented 4 syllable sequences with and without phonetic complexity of longer duration than accented 2 or 3 syllable phonetically complex sequences within the same breath group. The stuttering group showed significant variability from the normal group on these 4 syllable sequences and a trend to be more variable in general on all but one of the syllable sequences in this set of tasks.

Repeated measures analyses of variance results indicated that the normal group showed significant within group differences on all variable linguistic patterns and on 2 of the 3 reiterative counterparts. The stuttering group showed significant within group differences on 2 of the 3 variable linguistic patterns but only 1 of the 3 reiterative counterparts. Within group comparisons indicated no average intrasubject standard deviations on any tasks were significant for either group.

Based on the above results, Martin's (1972) theory of hierarchical rhythm structure which purports that accented syllables fall at roughly equal intervals was questioned. Phonetic complexity increased the number of significant stress to stress duration differences within both groups. Removal of phonetic complexity revealed that four syllable accent to accent sequences was the

point in the reiterative patterns at which significant differences were evidenced. These results point to the interaction of the number of syllables within accent to accent sequences and phonetic complexity as a key factor in determining difficulty of an utterance and the point at which timing differences might begin to occur between the two groups.

Relative Timing Differences

Martin's (1972) theory that the locus of each sound element in a sequence is determined in relationship to all other sound elements, both adjacent and nonadjacent, was explored in both imitation and formulation tasks. According to his theory, the sentence accents should occur with essential regularity despite tempo with hierarchical organization as phonetic complexity increased. Thus, the two time segments obtained by measuring duration from one accent to the next accent should not be significantly different. This has already been questioned in the previous section. Weismer and Fennell (1985) proposed much the same theory but made no reference to sentence accents. Their study revealed invariance in speech production as measured by duration occurred regardless of the point of measurement within an utterance when compared to the remainder of the

utterance. Comparison of M1/M2 and SD1/SD2 ratios within an utterance would reveal the existence of significant relative timing differences between stutterers and nonstutterers.

Delayed Imitation of Rate Change

Subject groups' averages and standard deviations for time segments 1 and 2 from the digitized live voice tasks and the variable linguistic sentence patterns and their reiterative counterparts tasks were used to form ratios for both groups.

There was only one significant difference between the two groups in 10 M1/M2 comparisons. This difference occurred on the reiterative utterances which involved a stressed sequence of 4 syllables and a stressed sequence of 2 syllables. There was also only one significant difference between the two groups in 10 of SD1/SD2 comparisons. This difference occurred on the slow digitized live voice task.

Both instances of significant differences occurred on nonsense syllable tasks. With the phonetic complexity factor removed, it appears that relative timing differences occur at rates that are perhaps

outside of a portion of the group's rate range or when the utterance task involves accent to accent syllable sequences of at least four syllables.

Formulation of Rate and Stress Changes

Subject groups' averages and standard deviations for time segments 1 and 2 from the formulation of rate and stress tasks were used to form ratios for both groups.

There was a significant difference between the two groups on the fast rate M1/M2 comparisons. There was also a significant difference between the two groups on the slow rate SD1/SD2 comparison. Formulation of a fast rate utterance and consistency of formulation of a slow rate were the point of relative timing differences between the stuttering group and their nonstuttering peers. This again points to "individual" rate ranges within which the stutterer can perform.

There were no significant differences between the two groups in formulation of stress. Again, the stutterers appeared to be capable of producing stress patterns as indicated by Bergmann (1986).

Discussion Summary and Future Study

In conclusion, stutterers appear to have individual rate ranges within which they function within normal limits on rhythmic tasks, imitation tasks and formulation tasks. Increasing phonetic complexity within a syllable appears to be the point at which stutterers' timing abilities eventually depart from within normal limit production. Stress differences as measured by duration are more likely to occur on stress to stress sequences of at least four syllables in length.

These results suggest an explanation of positive results using therapy techniques employing rate, length, and complexity strategies. Some support is given to Wingate's (1976) view that stutterers exhibit disturbances in prosody and Kent's (1984) view that stutterers are less skilled in generating motor sequence time plans. Bergmann (1986) pointed out the following reasons why stressed syllables were important to the occurrences of stuttering: 1) stressed syllables are the determinants of sentence timing patterns; 2) vowels in stressed syllables require more precise articulation than those in unstressed syllables and thus are

motorically a more difficult task; and 3) intonation contures can reveal emotions and attitudes expressed in speech. If this reasoning is followed from a physiological point of view, the theoretical model proposed by Zimmermann, Smith, and Hanley (1980) allows both linguistic and emotional events to directly or indirectly alter neuromotor activity resulting in the discoordination of (or change in) the speech system.

Future studies should explore the interaction of linguistic and emotional events as they are motorically expressed through the speech system. There is a need to examine both the fluent and nonfluent speech of stutterers. Further comparison of the fluent speech of stutterers and their nonstuttering peers as rate, number of syllables in an accent sequence, and within syllable phonetic complexity are hierarchically extended would perhaps reveal subtle differences in timing abilities which have been elusive to this point. Comparison of the disfluent speech of stutterers and their nonstuttering peers as rate, number of syllables in an accent sequence and phonetic complexity within a syllable are varied might be helpful in revealing motor programming differences as revealed by changes in the constancy of acoustic relative timing measures. It is proposed that stutterers would exhibit significantly

greater variability in duration measures of fluent speech as rate, length and phonetic complexity of the utterance increased. As the variables are increased it is also probable that stutterers' disfluency would increase and that some utterances would be impossible for the stutterers to produce as occurred on the task involving the word constitutionality where three of ten stuttering subjects were unable to produce the utterance.

There is a need to be creative in determining the stimuli to be measured in stuttering research. Examination of the conversational speech of stutterers and their nonstuttering peers experiencing the varied rate, stress patterns, and phonetic complexity normally expressed would perhaps be the most useful data base from which to begin. In this manner, a natural collection of emotional and linguistic events, both fluent and nonfluent, could be captured. Examination of an individual's motoric abilities to express prosody could be determined by measuring these acoustic events. Although this method would be time consuming, the results would be based on what stutterers and their nonstuttering peers do when they formulate speech.

More recent models of speech motor control derived from "slips of the tongue" data (Shattuck-Hufnagle, 1979) suggest that the linguistic form of an utterance

is "fit" into a syllabic frame containing syllabic stress information. Phonemic and featural element movements in these errors are constrained to like positions within this framework. The stutterer may have difficulty in programming these basic frameworks or in coordinating the phonemic/featural aspects of the utterance into the appropriate slots of the framework. Analysis of stutterers' spontaneous speech, in which this aspect of motor control is not supplied for the subject, as done in this study, may prove to be more challenging. The basic measurements utilized in this study may be applied to spontaneous speech productions to determine if stressed-unstressed distinctions, clustering distinctions, and other independent variables show greater discoordination.

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Appendix A

Raw Data

Column 1: Group 1 = Stutterers
Group 2 = Normals

Column 2: Subjects numbered 01 - 10

Column 3: Task numbers
11 = (bad) 60 bpm
12 = (brad) 60 bpm
13 = (bad brad) 60 bpm
16 = /ba/ 60 bpm
18 = /ba/ 80 bpm
21 = digitized live voice /ba ba ba/ (slow rate)
22 = digitized live voice /ba ba ba/ (fast rate)
23 = digitized live voice /'ba ba ba/
24 = digitized live voice /ba 'ba ba/
25 = formulated rate (Bob beat Bill, again.) slow rate
26 = formulated rate (Bob beat Bill, again.) fast rate
27 = formulated stress ('Bob beat Bill, again.)
28 = formulated stress (Bob 'beat Bill, again.)
31 = Bob and Becky ate peanut butter.
32 = Barry and Christopher bought candy.
33 = Christopher can dunk the basketball.
34 = Bob and Becky ate peanut butter.(reiterative)
35 = Barry and Christopher bought candy.(reiterative)
36 = Christopher can dunk the basketball.(reiterative)
41 = /stIk/ in stick
42 = /stIk/ in sticky
43 = /stIk/ in stickily
44 = /tIk/ in tick
45 = /tIk/ in ticker
46 = /tIk/ in tickertape
47 = /kan/ in con
48 = /kan/ in constitute
49 = /kan/ in constitution
50 = /kan/ in constitutionality
51 = /s/ in sit
52 = /s/ in spit
53 = /s/ in split

Column 4: Repetitions 1-10

Columns 5-10: Raw Data Points

1	01	11	01	1.4935	2.3446	3.3452	4.2844	5.2625	6.2017
1	01	11	02	1.4844	2.4927	3.3899	4.3429	5.3186	6.2568
1	01	11	03	1.4504	2.2815	3.2841	4.2490	5.2109	6.2290
1	01	11	04	1.3494	2.2788	3.3101	4.2592	5.1799	6.1280
1	01	11	05	1.3968	2.2721	3.2259	4.1385	5.1154	6.0827
1	01	11	06	1.3844	2.2673	3.2495	4.1866	5.1366	6.1024
1	01	11	07	1.2845	2.2579	3.2712	4.1415	5.2061	6.1819
1	01	11	08	1.3034	2.2560	3.2788	4.2233	5.1848	6.0795
1	01	11	09	1.2806	2.2283	3.2606	4.2988	5.2412	6.1397
1	01	11	10	1.3674	2.2512	3.2028	4.1862	5.1697	6.1526
1	01	12	01	1.3645	2.2584	3.2007	4.1502	5.0890	6.0133
1	01	12	02	1.5479	2.4670	3.4050	4.3521	5.4038	6.2802
1	01	12	03	1.4797	2.2836	3.2201	4.1325	5.1399	6.0991
1	01	12	04	1.2721	2.1929	3.1183	4.1495	5.0719	6.0757
1	01	12	05	1.3420	2.2510	3.1995	4.1715	5.1279	6.1106
1	01	12	06	1.4461	2.3263	3.2181	4.1935	5.1611	6.1069
1	01	12	07	1.3654	2.2573	3.2063	4.1807	5.1166	6.0111
1	01	12	08	1.5312	2.3769	3.3153	4.3006	5.2201	6.1415
1	01	12	09	1.5748	2.5074	3.4443	4.2814	5.2484	6.3014
1	01	12	10	1.5401	2.3554	3.3159	4.3430	5.2875	6.1875
1	01	13	01	1.5498	2.4371	3.3525	4.3122	5.3130	6.2527
1	01	13	02	1.4516	2.2843	3.3176	4.2056	5.1880	6.1092
1	01	13	03	1.3454	2.2028	3.1479	4.0625	5.0518	5.9864
1	01	13	04	1.5818	2.3835	3.3622	4.3216	5.2714	6.2096
1	01	13	05	1.3892	2.2906	3.2367	4.0710	5.0850	5.9844
1	01	13	06	1.5002	2.3254	3.2639	4.2113	5.2410	6.1304
1	01	13	07	1.3242	2.2362	3.2009	4.1481	5.1077	6.0359
1	01	13	08	1.4259	2.3233	3.2925	4.1782	5.2985	6.1660
1	01	13	09	1.3352	2.1118	3.1351	4.1058	5.1233	5.9847
1	01	13	10	1.4388	2.2839	3.2105	4.1624	5.1815	6.1041
1	01	16	01	1.0911	1.9536	2.8942	3.9208	4.8810	5.8175
1	01	16	02	1.2740	2.1845	3.1444	4.1860	5.1922	6.0936
1	01	16	03	1.3017	2.2152	3.1631	4.1300	5.1867	6.1386
1	01	16	04	1.2727	2.1443	3.1400	4.1891	5.1542	6.0256
1	01	16	05	1.3177	2.2867	3.2020	4.2454	5.1780	6.1633
1	01	16	06	1.5035	2.4463	3.4319	4.3671	5.3528	6.3278
1	01	16	07	1.3115	2.2945	3.3041	4.2853	5.3357	6.2416
1	01	16	08	1.3154	2.1593	3.1578	4.1889	5.2327	6.0814
1	01	16	09	1.4392	2.3950	3.3944	4.3997	5.3640	6.2373
1	01	16	10	1.4206	2.3774	3.4137	4.3756	5.3115	6.2138

1	01	18	01	2.5376	3.2526	3.9728	4.7606	5.5692	6.3076
1	01	18	02	1.9968	2.6520	3.3722	4.0976	4.8672	5.6186
1	01	18	03	1.4898	2.1892	2.8600	3.6504	4.4200	5.1740
1	01	18	04	1.2376	1.9630	2.6858	3.4450	4.2796	4.9322
1	01	18	05	1.4482	2.0956	2.7560	3.5360	4.2822	5.0440
1	01	18	06	1.0244	1.7160	2.4440	3.2084	3.9234	4.6826
1	01	18	07	0.5568	1.2688	1.9162	2.6650	3.4398	4.1548
1	01	18	08	0.9045	1.6227	2.3114	3.0498	3.8116	4.5474
1	01	18	09	1.5782	2.2724	3.0380	3.8142	4.5682	5.2650
1	01	18	10	1.0920	1.7680	2.5064	3.2188	4.0274	4.7320

1	01	21	01	0.7848	1.3260	1.8734
1	01	21	02	1.2558	1.3650	1.9032
1	01	21	03	1.0920	1.6172	2.1421
1	01	21	04	4.1808	4.7034	5.1974
1	01	21	05	1.7654	2.2828	2.8184
1	01	21	06	4.8204	5.3326	5.8552
1	01	21	07	3.8298	4.3862	4.9868
1	01	21	08	1.0322	1.5886	2.1086
1	01	21	09	1.0615	1.5990	2.0982
1	01	21	10	1.6406	2.1762	2.6910

1	01	22	01	3.6220	4.0052	4.3622
1	01	22	02	0.7344	1.0914	1.4756
1	01	22	03	3.2084	3.5152	3.8766
1	01	22	04	0.6916	1.0296	1.4170
1	01	22	05	3.3670	3.7414	4.1496
1	01	22	06	3.3176	3.6478	4.0352
1	01	22	07	0.7202	1.0738	1.4430
1	01	22	08	3.6686	4.0118	4.3732
1	01	22	09	0.8918	1.2298	1.6250
1	01	22	10	3.1954	3.5334	3.9026

1	01	23	01	3.4816	4.0154	4.3350
1	01	23	02	0.6578	1.2142	1.5184
1	01	23	03	5.0362	5.5562	5.9046
1	01	23	04	0.5226	1.0842	1.4430
1	01	23	05	3.3592	3.9624	4.2744
1	01	23	06	3.9780	4.5032	4.8516
1	01	23	07	3.5828	4.0950	4.4044
1	01	23	08	1.2116	1.7108	2.0202
1	01	23	09	0.9672	1.5236	1.8720
1	01	23	10	2.8340	3.3436	3.6582

1	01	24	01	3.1044	3.4164	3.9728
1	01	24	02	0.6760	1.0322	105392
1	01	24	03	0.6448	0.9542	1.4690
1	01	24	04	0.8138	1.1518	1.7264
1	01	24	05	3.5022	3.8428	4.3654
1	01	24	06	0.9048	1.2454	1.8122
1	01	24	07	3.2422	3.5932	4.0794
1	01	24	08	1.0452	1.5600	1.9058
1	01	24	09	3.4762	3.8116	4.3472
1	01	24	10	0.5850	0.8762	1.3572
1	01	25	01	1.3362	1.6660	1.9482
1	01	25	02	1.1084	1.5096	1.7986
1	01	25	03	0.9588	1.3054	1.6762
1	01	25	04	3.7944	4.2398	4.5866
1	01	25	05	3.5054	3.8998	4.2160
1	01	25	06	3.7638	4.1344	4.4506
1	01	25	07	3.5598	3.9508	4.2840
1	01	25	08	0.9894	1.4110	1.7612
1	01	25	09	1.5062	1.9210	2.2984
1	01	25	10	0.9520	1.4722	1.8462
1	01	26	01	4.4200	4.6988	4.9266
1	01	26	02	4.6614	4.8994	5.1170
1	01	26	03	1.0404	1.3192	1.5538
1	01	26	04	0.6766	0.9180	1.1152
1	01	26	05	0.7480	1.2478	1.2662
1	01	26	06	0.8602	1.1016	1.3158
1	01	26	07	4.2568	4.7294	4.7974
1	01	26	08	1.2376	1.5266	1.7748
1	01	26	09	4.0188	4.4050	4.5598
1	01	26	10	0.9792	1.2036	1.3770
1	01	27	01	1.7850	2.4242	2.6996
1	01	27	02	1.2240	2.0264	2.2644
1	01	27	03	3.9576	4.5866	4.8654
1	01	27	04	4.2466	4.8076	5.0932
1	01	27	05	4.9028	5.5386	5.8106
1	01	27	06	1.0302	1.7102	1.9856
1	01	27	07	4.8450	5.6882	5.9296
1	01	27	08	4.2942	4.9742	5.2258
1	01	27	09	1.5096	2.0366	2.4820
1	01	27	10	0.6256	1.3220	1.3906

1	01	28	01	4.6036	5.2020	5.6814
1	01	28	02	4.4574	5.0388	5.4842
1	01	28	03	1.0064	1.5198	1.8836
1	01	28	04	1.3192	1.8564	2.3528
1	01	28	05	3.4340	4.0460	4.4812
1	01	28	06	1.4994	2.0672	2.4752
1	01	28	07	4.1106	4.8144	5.3754
1	01	28	08	4.2772	4.9164	5.5522
1	01	28	09	0.8466	1.4076	1.9278
1	01	28	10	4.3860	4.8416	5.2734
1	01	31	01	1.3056	2.1182	2.9633
1	01	31	02	0.7072	2.3902	3.2674
1	01	31	03	1.0872	1.8768	2.7574
1	01	31	04	1.3430	2.3392	3.2658
1	01	31	05	1.1900	2.0752	2.9682
1	01	31	06	2.8220	3.6856	4.5866
1	01	31	07	0.6930	1.6562	2.5042
1	01	31	08	2.5504	3.4239	4.2094
1	01	31	09	0.6589	1.4966	2.4106
1	01	32	01	1.5980	2.3814	3.3146
1	01	32	02	2.2278	2.9922	3.9273
1	01	32	03	1.0954	1.8784	2.7819
1	01	32	04	1.1792	2.0294	3.0280
1	01	32	05	1.1751	2.0166	2.9162
1	01	32	06	1.0236	1.7352	2.5871
1	01	32	07	0.9984	1.7602	2.6440
1	01	32	08	1.4254	2.2162	3.0860
1	01	32	09	0.9434	1.7122	2.5312
1	01	32	10	1.1570	1.9482	2.9070
1	01	33	01	1.7204	2.6180	3.1178
1	01	33	02	0.3434	1.1152	1.5606
1	01	33	03	4.2602	5.2734	5.9160
1	01	33	04	0.8466	1.8734	2.5772
1	01	33	05	4.3486	5.4162	6.2492
1	01	33	06	0.6562	1.6932	2.3358
1	01	33	07	3.8250	5.4502	6.3308
1	01	33	08	4.0086	5.0592	5.8514
1	01	33	09	3.8318	4.8858	5.5692
1	01	33	10	0.3672	1.4348	2.1250

1	01	34	01	0.7151	1.6976	2.5989
1	01	34	02	1.2708	2.2510	3.1802
1	01	34	03	1.3013	1.5986	2.4611
1	01	34	04	1.0182	2.0268	2.8750
1	01	34	05	1.8308	2.7692	3.6252
1	01	34	06	1.0436	2.0113	2.9008
1	01	34	07	0.9060	1.8890	2.7785
1	01	34	08	1.0282	2.0544	3.0536
1	01	34	09	1.1358	2.0748	3.0237
1	01	34	10	0.8876	1.8653	2.7763

1	01	35	01	0.5946	1.5754	2.5698
1	01	35	02	0.7426	1.7208	2.6742
1	01	35	03	1.0428	2.0190	2.9510
1	01	35	04	1.0123	1.9665	2.6105
1	01	35	05	1.1176	2.0390	3.0064
1	01	35	06	1.1989	2.1457	3.1358
1	01	35	07	1.4436	2.4116	3.3818
1	01	35	08	1.3518	2.3491	3.3386
1	01	35	09	1.4227	2.4138	3.4310
1	01	35	10	1.3044	2.2541	3.2320

1	01	36	01	0.7412	1.8802	2.6860
1	01	36	02	1.4280	2.4650	3.3558
1	01	36	03	1.5562	2.5823	3.3852
1	01	36	04	1.4246	2.4902	3.3456
1	01	36	05	1.2750	2.2984	3.1484
1	01	36	06	1.0880	2.1862	3.0498
1	01	36	07	1.2886	2.4.38	3.2368
1	01	36	08	0.9367	2.0474	2.8855
1	01	36	09	1.0740	2.1330	2.9850
1	01	36	10	1.1764	2.2916	3.1178

1	01	41	01	0.6564	1.0380
1	01	41	02	3.7020	4.1205
1	01	41	03	3.0543	3.3822
1	01	41	04	3.3866	3.8009
1	01	41	05	0.8468	1.1879
1	01	41	06	1.1993	1.5695
1	01	41	07	0.7035	1.0386
1	01	41	08	3.6610	4.0609
1	01	41	09	1.0862	1.4746

1	01	42	01	0.8497	1.1851
1	01	42	02	3.4000	3.6894
1	01	42	03	0.8094	1.1379
1	01	42	04	1.0471	1.3963
1	01	42	05	0.9268	1.2706
1	01	42	06	1.1588	1.5347
1	01	42	07	3.5370	3.8562
1	01	42	08	1.1576	1.4528
1	01	42	09	1.1063	1.4393
1	01	42	10	1.0821	1.4346
1	01	43	01	6.0642	6.3774
1	01	43	02	6.0156	6.3166
1	01	43	03	5.5568	5.8254
1	01	43	04	3.7520	4.0518
1	01	43	05	3.2913	3.6181
1	01	43	06	5.6586	5.9236
1	01	43	07	3.3007	3.5920
1	01	43	08	3.3046	3.5766
1	01	43	09	3.3317	3.6182
1	01	43	10	3.5502	3.8316
1	01	44	01	3.2632	3.3906
1	01	44	02	5.8630	6.0038
1	01	44	03	3.7768	3.9250
1	01	44	04	0.6732	0.8154
1	01	44	05	1.5666	1.6850
1	01	44	06	0.6338	0.7780
1	01	44	07	4.1044	4.2510
1	01	44	08	3.9548	4.0932
1	01	44	09	0.6774	0.8232
1	01	44	10	5.5124	5.6332
1	01	45	01	5.5820	5.7022
1	01	45	02	3.6040	3.7456
1	01	45	03	0.8580	1.0232
1	01	45	04	5.4118	5.5528
1	01	45	05	5.2404	5.3646
1	01	45	06	6.0116	6.1640
1	01	45	07	1.4062	1.5487
1	01	45	08	3.7022	3.8592
1	01	45	09	3.2780	3.4010
1	01	45	10	0.9246	1.0834

1	01	46	01	0.8384	0.9442
1	01	46	02	1.3166	1.4351
1	01	46	03	1.3210	1.4364
1	01	46	04	2.7946	2.8822
1	01	46	05	0.9743	1.0706
1	01	46	06	3.6994	3.7990
1	01	46	07	1.2296	1.3620
1	01	46	08	1.5488	1.6532
1	01	46	09	5.4214	5.5356
1	01	46	10	3.2050	3.2938
1	01	47	01	4.1708	4.4848
1	01	47	02	4.4839	4.8826
1	01	47	03	4.8270	5.2698
1	01	47	04	1.4033	1.8467
1	01	47	05	1.2643	1.6780
1	01	47	06	1.4528	1.8788
1	01	47	07	1.3838	1.8032
1	01	47	08	4.6593	5.0820
1	01	47	09	4.4527	4.8074
1	01	47	10	1.2882	1.7208
1	01	48	01	3.3669	3.6291
1	01	48	02	0.8884	1.1402
1	01	48	03	1.3776	1.6064
1	01	48	04	4.2788	4.5555
1	01	48	05	3.3240	3.5869
1	01	48	06	4.0604	4.3183
1	01	48	07	4.9770	5.2354
1	01	48	08	4.4538	4.6788
1	01	48	09	1.2538	1.4974
1	01	48	10	0.8666	1.1018
1	01	49	01	5.0718	5.3517
1	01	49	02	4.6041	4.8498
1	01	49	03	1.4242	1.6874
1	01	49	04	0.3170	0.5547
1	01	49	05	4.4486	4.6746
1	01	49	06	1.2033	1.4491
1	01	49	07	3.5164	3.7501
1	01	49	08	4.5556	4.8525
1	01	49	09	4.0691	4.2998
1	01	49	10	0.9918	1.2399

1	01	50	01	1.5741	1.8258
1	01	50	02	1.0642	1.3176
1	01	50	03	0.9444	1.1916
1	01	50	04	4.0540	4.3127
1	01	50	05	4.3941	4.6620
1	01	50	06	1.5860	1.8217
1	01	50	07	3.9100	4.1547
1	01	50	08	1.1230	1.3646
1	01	50	09	1.3034	1.5557
1	01	50	10	4.2682	4.5221

1	01	51	01	3.3676	3.5798
1	01	51	02	0.7450	0.9425
1	01	51	03	3.1544	3.3949
1	01	51	04	4.0762	4.3019
1	01	51	05	4.2464	4.4625
1	01	51	06	1.0558	1.3382
1	01	51	07	3.4438	3.6634
1	01	51	08	3.93.9	4.1602
1	01	51	09	3.9786	4.2055
1	01	51	10	3.4061	3.6408

1	01	52	01	3.2732	3.5852
1	01	52	02	3.1477	3.4110
1	01	52	03	3.0753	3.3803
1	01	52	04	3.2971	3.6021
1	01	52	05	1.3954	1.6888
1	01	52	06	3.8090	4.0891
1	01	52	07	3.4721	3.7921
1	01	52	08	3.4239	3.7722
1	01	52	09	1.3384	1.6556
1	01	52	10	1.3800	1.6846

1	01	53	01	1.1671	1.4313
1	01	53	02	1.0118	1.2928
1	01	53	03	0.9283	1.2282
1	01	53	04	1.6494	1.9236
1	01	53	05	1.2097	1.5127
1	01	53	06	1.1464	1.4392
1	01	53	07	1.0044	1.2627
1	01	53	08	1.4129	1.7159
1	01	53	09	4.0861	4.3925
1	01	53	10	1.1774	1.4877

1	02	11	01	1.2332	2.1426	3.0560	3.9945	4.9992	5.9108
1	02	11	02	1.3132	2.2202	3.1498	4.0763	5.0886	5.9574
1	02	11	03	1.2749	2.2259	3.1569	4.0530	4.9030	5.7606
1	02	11	04	1.3332	2.1918	3.1110	4.0381	5.0068	5.9329
1	02	11	05	1.2892	2.2230	3.2032	4.1361	5.1044	5.9685
1	02	11	06	1.2826	2.2576	3.2764	4.2782	5.2836	6.2758
1	02	11	07	1.1890	2.1414	3.0687	4.0724	5.0678	6.0738
1	02	11	08	1.2194	2.2425	3.2820	4.2938	5.2358	6.3071
1	02	11	09	1.2662	2.2786	3.2561	4.2306	5.2256	6.1826
1	02	11	10	1.2871	2.1506	3.0838	4.1082	5.1418	6.0962
1	02	12	01	1.3278	2.3190	3.3262	4.2822	5.2324	6.2056
1	02	12	02	1.2018	2.1102	3.0478	4.0174	5.0116	5.9916
1	02	12	03	1.4570	2.3628	3.2962	4.2421	5.2450	6.3565
1	02	12	04	1.3504	2.2962	3.2424	4.1682	5.1042	6.0310
1	02	12	05	1.3695	2.2804	3.2735	4.3005	5.3242	6.3105
1	02	12	06	1.2734	2.2371	3.2218	4.1712	5.2729	6.3070
1	02	12	07	1.3352	2.1580	3.2472	4.1973	5.1746	6.2339
1	02	12	08	1.2372	2.2026	3.1392	4.0691	5.0924	6.1420
1	02	12	09	1.3356	2.2380	3.2170	4.1521	5.1694	6.2516
1	02	12	10	1.2364	2.2912	3.2382	4.2410	5.2531	6.2047
1	02	13	01	1.2700	2.2414	3.2703	4.2536	5.2622	6.2891
1	02	13	02	1.3502	2.2734	3.2828	4.2556	5.2618	6.3210
1	02	13	03	1.3662	2.2568	3.2516	4.2598	5.2688	6.2435
1	02	13	04	1.2490	2.2390	3.2254	4.3282	5.2518	6.2715
1	02	13	05	1.2676	2.1274	3.1022	4.0439	5.1077	6.1492
1	02	13	06	1.3626	2.3094	3.2388	4.1901	5.1586	6.1336
1	02	13	07	1.2946	2.1804	3.1540	4.1512	5.1420	6.1278
1	02	13	08	1.3106	2.2674	3.2574	4.2379	5.3091	6.2693
1	02	13	09	1.3012	2.2457	3.2314	4.1919	5.1902	6.1696
1	02	13	10	1.3632	2.2532	3.2848	4.2112	5.2224	6.2198
1	02	16	01	1.2310	2.3512	3.3312	4.2890	5.3374	6.3204
1	02	16	02	0.5972	1.4728	2.3736	3.2956	4.2324	5.2200
1	02	16	03	1.3204	2.8658	3.3458	4.3412	5.3376	6.3489
1	02	16	04	1.2128	2.1760	3.2228	4.2538	5.2340	6.2495
1	02	16	05	1.2530	2.3066	3.3170	4.2434	5.2132	6.2230
1	02	16	06	1.4624	2.3474	3.2226	4.1912	5.1690	6.2030
1	02	16	07	1.3919	2.2992	3.2418	4.3044	5.3501	6.3282
1	02	16	08	1.2608	2.2132	3.1792	4.0890	5.0926	6.0730
1	02	16	09	1.1830	2.1137	3.0005	3.8608	4.8447	5.7508
1	02	16	10	1.2888	2.3004	3.2864	4.1810	5.1904	6.2126

1	02	18	01	1.0306	1.7792	2.5318	3.2144	3.9898	4.6868
1	02	18	02	1.1648	1.8812	2.6837	3.3748	4.1462	4.8108
1	02	18	03	1.1612	1.9012	2.6218	3.3258	4.0546	4.7834
1	02	18	04	1.4155	2.1576	2.8812	3.5646	4.3050	5.0230
1	02	18	05	1.1768	1.9514	2.6600	3.3746	4.1084	4.8404
1	02	18	06	1.4076	2.1418	2.9016	3.5596	4.3186	5.0118
1	02	18	07	1.2290	1.8538	2.4740	3.3058	3.9554	4.6566
1	02	18	08	1.1691	1.9278	2.6200	3.3516	4.1336	4.8562
1	02	18	09	1.2862	2.0040	2.7480	3.4650	4.2357	4.9760
1	02	18	10	1.2506	1.9188	2.5860	3.2730	4.0860	4.8766

1	02	21	01	0.3692	0.8341	1.3115
1	02	21	02	3.3122	3.7490	4.2285
1	02	21	03	3.2956	3.8157	4.3449
1	02	21	04	3.6646	4.1707	4.6649
1	02	21	05	0.8292	1.2968	1.7949
1	02	21	06	3.5854	4.0908	4.6081
1	02	21	07	0.9171	1.4393	1.9545
1	02	21	08	1.0155	1.5013	2.0067
1	02	21	09	3.8275	4.3602	4.8635
1	02	21	10	1.1472	1.7247	2.2413

1	02	22	01	0.4067	0.7292	1.0732
1	02	22	02	2.6819	3.0069	3.3079
1	02	22	03	0.8238	1.1823	1.5303
1	02	22	04	0.9368	1.2678	1.6328
1	02	22	05	0.7889	1.1304	1.4834
1	02	22	06	3.5936	3.9356	4.3083
1	02	22	07	0.7259	1.0474	1.3754
1	02	22	08	2.9267	3.2472	3.5797
1	02	22	09	0.4939	0.8129	1.1344
1	02	22	10	3.8416	4.2041	4.5464

1	02	23	01	0.9278	1.3358	1.6838
1	02	23	02	3.2910	3.8472	4.1874
1	02	23	03	0.7846	1.2778	1.5880
1	02	23	04	3.1754	3.6800	4.0436
1	02	23	05	0.3113	0.8195	1.1716
1	02	23	06	1.0896	1.6296	1.9518
1	02	23	07	3.2025	3.6905	4.0085
1	02	23	08	0.7630	1.2958	1.6114
1	02	23	09	3.0499	3.5595	3.8822
1	02	23	10	3.2050	3.6580	4.0256

1	02	24	01	0.8388	1.1503	1.5858
1	02	24	02	3.2104	3.5539	4.0234
1	02	24	03	2.7437	3.0677	3.5747
1	02	24	04	2.8012	3.1324	3.6268
1	02	24	05	0.7030	1.0234	1.5663
1	02	24	06	3.0828	3.3960	3.9413
1	02	24	07	0.7654	1.0734	1.5849
1	02	24	08	0.8698	1.2040	1.6853
1	02	24	09	3.1786	3.5068	4.0432
1	02	24	10	0.6576	0.9768	1.5192
1	02	25	01	4.0740	4.5798	5.0112
1	02	25	02	3.8139	4.2034	4.4419
1	02	25	03	0.9916	1.3200	1.5460
1	02	25	04	1.4154	1.7679	1.9889
1	02	25	05	0.7632	1.0764	1.3124
1	02	25	06	4.3258	4.6374	4.8626
1	02	25	07	0.9693	1.3118	1.5518
1	02	25	08	2.7128	3.1130	3.3842
1	02	25	09	2.1890	2.5600	2.8185
1	02	25	10	0.5795	0.9706	1.2652
1	02	26	01	1.1014	1.2658	1.4355
1	02	26	02	3.7574	3.9370	4.1170
1	02	26	03	4.8214	5.0789	5.2714
1	02	26	04	1.6532	1.9052	2.0684
1	02	26	05	2.0219	2.3459	2.5514
1	02	26	06	0.5038	0.8083	1.0053
1	02	26	07	1.3052	1.6164	1.8500
1	02	26	08	3.6724	3.9912	4.2152
1	02	26	09	3.1316	3.4318	3.6108
1	02	26	10	4.1720	4.4828	4.7344
1	02	27	01	0.8722	1.3105	1.7398
1	02	27	02	4.3243	4.7028	4.9158
1	02	27	03	2.3260	2.6944	2.9028
1	02	27	04	1.5104	1.9886	2.2418
1	02	27	05	4.0495	4.4650	4.6830
1	02	27	06	0.8516	1.3436	1.5554
1	02	27	07	1.4070	1.9991	2.3330
1	02	27	08	1.2092	1.7150	2.0250
1	02	27	09	1.6588	2.1334	2.4681

1	02	28	01	1.4958	1.8863	2.1998
1	02	28	02	1.7761	2.2955	2.7855
1	02	28	03	5.3537	5.8374	6.2945
1	02	28	04	4.7198	5.1896	5.5964
1	02	28	05	4.7434	5.1589	5.4449
1	02	28	06	1.2810	1.6770	1.9660
1	02	28	07	5.2180	5.6564	5.9934
1	02	28	08	4.6988	5.0513	5.2508
1	02	28	09	0.5514	1.0062	1.3044
1	02	28	10	1.6162	2.0502	2.3392
1	02	31	01	0.6156	1.4551	2.2172
1	02	31	02	0.5135	2.1312	2.0479
1	02	31	03	4.1520	5.7089	5.6298
1	02	31	04	3.8141	4.5347	5.1756
1	02	31	05	0.6874	1.4238	1.9881
1	02	31	06	3.7312	4.5018	5.1682
1	02	31	07	0.6167	1.4159	2.0396
1	02	31	08	0.4816	1.2348	1.9306
1	02	31	09	0.7027	1.5299	2.2411
1	02	31	10	1.6192	2.4175	3.1399
1	02	32	01	0.4424	0.9953	1.7117
1	02	32	02	3.5582	4.1684	4.9460
1	02	32	03	1.4955	2.3847	3.5430
1	02	32	04	1.0207	1.6736	2.6536
1	02	32	05	4.2318	5.0315	6.0281
1	02	32	06	0.9018	1.8234	2.7438
1	02	32	07	0.3088	1.0763	2.2170
1	02	32	08	3.9496	4.7595	5.8053
1	02	32	09	0.3551	1.1603	2.0777
1	02	32	10	3.8758	4.6108	5.6910
1	02	33	01	0.4300	1.2547	1.8085
1	02	33	02	3.4604	4.4320	5.0620
1	02	33	03	0.9429	2.0429	2.8784
1	02	33	04	1.0694	2.2188	3.0728
1	02	33	05	0.4840	1.5160	2.3352
1	02	33	06	4.2318	5.2825	6.0185
1	02	33	07	0.8764	1.9148	2.7492
1	02	33	08	3.9226	4.8575	5.4275
1	02	33	09	0.9437	1.8781	2.5893
1	02	33	10	1.4800	2.5329	3.4073

1	02	34	01	0.4557	1.6950	2.7540
1	02	34	02	0.4872	1.6680	2.7600
1	02	34	03	1.2432	2.3642	3.5481
1	02	34	04	1.6840	2.9054	3.9878
1	02	34	05	0.9390	2.0877	3.1308
1	02	34	06	0.5797	1.6770	2.7264
1	02	34	07	0.7622	1.9268	3.0958
1	02	34	08	0.3904	1.6464	2.9442
1	02	34	09	0.8318	2.1112	3.4020
1	02	34	10	1.1160	2.2380	3.5304
1	02	35	01	0.4137	1.4188	2.4658
1	02	35	02	0.3279	1.3794	2.4049
1	02	35	03	1.2981	2.3209	3.3374
1	02	35	04	0.9974	1.9536	2.9292
1	02	35	05	1.1796	2.1433	3.0828
1	02	35	06	1.2374	2.2340	3.4015
1	02	35	07	0.8642	1.9657	2.9332
1	02	35	08	1.0581	2.0096	2.9716
1	02	35	09	1.1257	2.1161	3.0831
1	02	35	10	0.6436	1.5649	2.5409
1	02	36	01	0.4792	1.4728	2.3291
1	02	36	02	0.3211	1.4784	2.2456
1	02	36	03	0.4012	1.4959	2.3268
1	02	36	04	0.8841	2.0305	2.8114
1	02	36	05	1.6376	2.6444	3.4694
1	02	36	06	1.6589	2.7327	3.5897
1	02	36	07	1.8181	2.7790	3.5850
1	02	36	08	1.4475	2.4580	3.3362
1	02	36	09	1.4474	2.4473	3.3190
1	02	36	10	2.6671	3.5956	4.5136
1	02	41	01	3.8816	4.1750	
1	02	41	02	4.0468	4.3573	
1	02	41	03	0.9505	1.2907	
1	02	41	04	5.6850	5.9943	
1	02	41	05	3.2812	3.6192	
1	02	41	06	5.7787	6.1465	
1	02	41	07	4.0418	4.3754	
1	02	41	08	1.2492	1.5432	
1	02	41	09	1.0108	1.0351	
1	02	41	10	0.6988	1.0351	

1	02	42	01	5.6498	5.8967
1	02	42	02	3.1760	3.4553
1	02	42	03	0.9776	1.2593
1	02	42	04	1.1588	1.4771
1	02	42	05	5.5615	5.8519
1	02	42	06	3.4384	3.7345
1	02	42	07	0.6996	0.9748
1	02	42	08	3.1030	3.3616
1	02	42	09	5.7652	6.0139
1	02	42	10	0.7459	1.0156
1	02	43	01	1.4288	1.6745
1	02	43	02	5.3294	5.5931
1	02	43	03	3.3004	3.5623
1	02	43	04	5.6865	5.9607
1	02	43	05	0.9196	1.1648
1	02	43	06	1.0180	1.2979
1	02	43	07	1.2568	1.5604
1	02	43	08	3.5072	3.7835
1	02	43	09	5.7883	6.1216
1	02	43	10	5.0101	5.2819
1	02	44	01	1.1471	1.2869
1	02	44	02	3.3944	3.5338
1	02	44	03	1.1221	1.2784
1	02	44	04	0.9145	1.1535
1	02	44	05	0.8740	1.0496
1	02	44	06	1.5214	1.6796
1	02	44	07	4.2766	4.4192
1	02	44	08	1.2694	1.4494
1	02	44	09	3.2766	3.4400
1	02	44	10	3.5534	3.7372
1	02	45	01	1.2971	1.4339
1	02	45	02	1.1658	1.2948
1	02	45	03	1.4167	1.5424
1	02	45	04	3.2676	3.4208
1	02	45	05	2.8030	2.9690
1	02	45	06	3.4684	3.5986
1	02	45	07	3.8525	4.0064
1	02	45	08	3.1432	3.2716
1	02	45	09	4.5966	4.7494
1	02	45	10	4.1467	4.2877

1	02	46	01	3.8875	4.0192
1	02	46	02	3.6904	3.8236
1	02	46	03	3.2148	3.3288
1	02	46	04	0.7162	1.0002
1	02	46	05	4.2072	4.3166
1	02	46	06	1.3680	1.4920
1	02	46	07	0.8142	0.9474
1	02	46	08	1.6024	1.7252
1	02	46	09	1.5824	1.6986
1	02	46	10	1.0754	1.2124
1	02	47	01	1.2006	1.6432
1	02	47	02	0.8289	1.1910
1	02	47	03	1.0270	1.5338
1	02	47	04	1.1882	1.5966
1	02	47	05	0.8900	1.2182
1	02	47	06	1.1289	1.5447
1	02	47	07	1.0402	1.6806
1	02	47	08	3.3406	3.8330
1	02	47	09	0.8306	1.2842
1	02	47	10	2.9972	3.4468
1	02	48	01	4.2041	4.4627
1	02	48	02	3.4941	3.7188
1	02	48	03	3.5199	3.7007
1	02	48	04	3.7968	4.0527
1	02	48	05	0.9839	1.2032
1	02	48	06	1.2624	1.4949
1	02	48	07	3.7647	4.0146
1	02	48	08	1.1052	1.3188
1	02	49	01	1.1000	1.3211
1	02	49	02	1.2572	1.5100
1	02	49	03	0.9784	1.2703
1	02	49	04	3.8764	4.0900
1	02	49	05	0.8348	1.0277
1	02	49	06	1.1202	1.3422
1	02	49	07	3.9687	4.1697
1	02	49	08	4.0848	4.2471
1	02	49	09	1.0755	1.3032
1	02	49	10	4.2160	4.4809

1	02	50	01	3.6046	3.8233
1	02	50	02	3.7499	3.9878
1	02	50	03	3.6854	3.9473
1	02	50	04	0.5592	0.7986
1	02	50	05	3.6740	3.8562
1	02	50	06	3.3496	3.5572
1	02	50	07	3.4066	3.6661
1	02	50	08	0.6312	0.7998
1	02	50	09	3.8182	4.0350
1	02	50	10	1.6119	2.0163
1	02	51	01	0.6438	0.7960
1	02	51	02	0.8800	1.0116
1	02	51	03	0.9116	1.0740
1	02	51	04	2.8041	2.9784
1	02	51	05	4.7538	4.9314
1	02	51	06	2.8362	3.0022
1	02	51	07	3.2556	3.3938
1	02	51	08	5.7176	5.9074
1	02	51	09	0.9164	1.0822
1	02	51	10	2.8411	2.9926
1	02	52	01	4.4648	4.5284
1	02	52	02	2.9430	3.0368
1	02	52	03	4.8824	4.9902
1	02	52	04	1.0513	1.1785
1	02	52	05	4.8011	4.8965
1	02	52	06	2.9117	3.0395
1	02	52	07	5.1166	5.2069
1	02	52	08	0.8651	0.9719
1	02	52	09	0.7238	0.8816
1	02	52	10	1.0955	1.2233
1	02	53	01	4.5020	4.6061
1	02	53	02	2.5122	2.6109
1	02	53	03	4.9448	5.0046
1	02	53	04	2.7757	2.8618
1	02	53	05	0.8548	0.9428
1	02	53	06	1.0563	1.1313
1	02	53	07	5.3000	5.3932
1	02	53	08	2.9533	3.0802
1	02	53	09	0.8548	0.9428

1	03	11	01	1.3504	2.3358	3.2954	4.2756	5.3024	6.2893
1	03	11	02	1.2482	2.2384	3.2842	4.2984	5.2542	6.2222
1	03	11	03	1.3002	2.2449	3.3157	4.3053	5.4252	6.3934
1	03	11	04	1.2510	2.0806	3.2478	4.2020	5.2780	6.1656
1	03	11	05	1.4033	2.3147	3.3384	4.2776	5.2728	6.2630
1	03	11	06	1.3008	2.2493	3.3790	4.2374	5.2254	6.1693
1	03	11	07	1.2848	2.1902	3.1894	4.1921	5.0794	6.1996
1	03	11	08	0.6876	1.6506	2.6222	3.6421	4.5844	5.6505
1	03	11	09	1.5320	2.3540	3.3256	4.2874	5.2815	6.2352
1	03	11	10	1.3223	2.2352	3.2516	4.3340	5.2974	6.2458
1	03	12	01	1.2434	2.2914	3.2233	4.2164	5.2196	6.1454
1	03	12	02	1.2438	2.2928	3.2252	4.2184	5.2214	6.1470
1	03	12	03	1.1076	2.0790	3.1135	4.1.30	5.0587	5.9880
1	03	12	04	1.1851	2.0848	3.0626	4.0142	5.0056	5.9526
1	03	12	05	1.1484	2.0406	2.9869	3.9612	4.9249	6.0632
1	03	12	06	0.8964	1.8756	2.8427	3.9372	4.9308	5.8862
1	03	12	07	1.1845	2.2172	3.2115	4.1740	5.1971	6.1491
1	03	12	08	1.1128	2.1768	3.2352	4.1568	5.1580	6.1021
1	03	12	09	1.0790	2.0086	3.0426	4.0556	5.0080	5.9794
1	03	12	10	1.1602	2.2446	3.1671	4.0743	5.1884	6.1457
1	03	13	01	0.9728	1.7104	2.7298	3.5748	4.6768	5.7224
1	03	13	02	1.2273	2.1577	3.1135	3.9579	5.1309	6.1712
1	03	13	03	1.3060	2.3235	3.2284	4.3010	5.2674	6.1356
1	03	13	04	1.2032	1.9734	3.1454	4.1446	5.1696	6.2255
1	03	13	05	1.3599	2.2224	3.1699	4.1272	5.0848	6.0624
1	03	13	06	1.3736	2.2696	3.2917	4.1793	5.1830	6.1308
1	03	13	07	1.1431	2.0107	3.0979	4.0726	5.0787	5.9797
1	03	13	08	1.1266	1.9461	3.1237	3.9282	4.9924	5.8670
1	03	13	09	1.2836	2.2465	3.2367	4.2510	5.1724	6.1805
1	03	16	01	0.4461	1.4784	2.4604	3.5698	4.5474	5.4215
1	03	16	02	0.4270	1.3613	2.4028	3.4453	4.4276	5.3952
1	03	16	03	1.3245	2.3569	3.3988	4.4215	5.3539	6.2676
1	03	16	04	1.1960	2.3583	3.2724	4.2852	5.2635	6.2530
1	03	16	05	1.3871	2.3228	3.2876	4.2042	5.2664	6.3249
1	03	16	06	1.3462	2.3664	3.3968	4.3775	5.3482	6.3423
1	03	16	07	1.2428	2.3011	3.2214	4.2364	5.1912	6.1976
1	03	16	08	1.3189	2.2436	3.2898	4.3518	5.2661	6.2602
1	03	16	09	1.3193	2.2824	3.2404	4.3321	5.2244	6.1878
1	03	16	10	1.2452	2.3029	3.3361	4.4153	5.3139	6.2424

1	03	18	01	1.5834	2.2561	3.0002	3.7571	4.5076	5.2419
1	03	18	02	2.3411	3.0765	3.7993	4.5619	5.2858	6.0678
1	03	18	03	2.4484	3.0614	3.7572	4.5184	5.2127	5.9982
1	03	18	04	2.3952	3.0477	3.8075	4.5237	5.3301	6.0439
1	03	18	05	2.4626	3.1254	3.8733	4.6358	5.3342	6.1027
1	03	18	06	2.4464	3.1994	3.8407	4.5759	5.2904	6.1109
1	03	18	07	1.6665	2.3708	3.0984	3.8191	4.5921	5.4150
1	03	18	08	1.9369	2.6706	3.3466	4.0944	4.8627	5.6317
1	03	18	09	1.6992	2.4428	3.1260	3.9081	4.6265	5.4000
1	03	18	10	1.5136	2.1832	2.9634	3.6917	4.4313	5.1662

1	03	21	01	0.5792	1.0300	1.5165
1	03	21	02	3.3808	3.7900	4.1902
1	03	21	03	2.7848	3.2734	3.8726
1	03	21	04	5.3889	5.8614	6.3906
1	03	21	05	5.2756	5.7250	6.2578
1	03	21	06	0.6530	1.0748	1.5722
1	03	21	07	3.1137	3.6002	4.1483
1	03	21	08	3.3129	3.8190	4.3580
1	03	21	09	0.5207	0.9862	1.5574
1	03	21	10	3.5380	4.0042	4.5628

1	03	22	01	0.2932	0.6044	0.9344
1	03	22	02	3.9569	4.2944	4.6399
1	03	22	03	0.5441	0.8791	1.2501
1	03	22	04	2.6740	3.0290	3.4225
1	03	22	05	5.1374	5.4649	5.8390
1	03	22	06	0.6753	1.0273	1.4198
1	03	22	07	3.0639	3.4068	3.7311
1	03	22	08	2.9334	3.2549	3.5859
1	03	22	09	1.2219	1.5364	1.8779
1	03	22	10	3.3508	3.6968	4.0613

1	03	23	01	0.4334	0.8469	1.1789
1	03	23	02	3.1120	3.5425	3.8735
1	03	23	03	3.1934	3.6335	3.9378
1	03	23	04	4.9282	5.3662	5.7334
1	03	23	05	3.1164	3.5494	3.8889
1	03	23	06	0.6984	1.0629	1.4409
1	03	23	07	0.5754	0.9876	1.3506
1	03	23	08	3.7369	4.1524	4.5074
1	03	23	09	0.8868	1.2788	1.6288
1	03	23	10	3.7367	4.1486	4.4900

1	03	24	01	1.1951	1.5361	2.0983
1	03	24	02	4.3701	4.6674	5.2298
1	03	24	03	0.6630	0.9540	1.5684
1	03	24	04	0.6694	0.9988	1.3936
1	03	24	05	5.0799	5.3854	5.8189
1	03	24	06	2.9269	3.2609	3.6399
1	03	24	07	3.1979	3.4944	3.8719
1	03	24	08	1.1843	1.4938	1.8753
1	03	24	09	0.6984	1.0304	1.4054
1	03	24	10	0.6914	1.0309	1.4804
1	03	25	01	1.7556	2.1636	2.5800
1	03	25	02	4.3548	4.7382	5.1042
1	03	25	03	0.6235	0.9745	1.2930
1	03	25	04	1.0030	1.3636	1.7542
1	03	25	05	0.8524	1.2082	1.5706
1	03	25	06	1.0948	1.4578	1.8028
1	03	25	07	3.5172	3.8568	4.1604
1	03	25	08	1.1608	1.5070	1.8814
1	03	25	09	0.4430	0.7952	1.1528
1	03	25	10	2.9968	3.3826	3.7786
1	03	26	01	4.8854	5.2454	5.5652
1	03	26	02	1.3234	1.6419	1.9434
1	03	26	03	5.1691	5.4836	5.7871
1	03	26	04	4.1684	4.4974	4.7939
1	03	26	05	1.3314	1.6639	1.9819
1	03	26	06	3.7024	3.9520	4.2128
1	03	26	07	4.6476	4.9836	5.3166
1	03	26	08	2.1095	2.4520	2.7800
1	03	26	09	3.3417	3.6267	3.8887
1	03	26	10	3.7581	4.0646	4.3631
1	03	28	01	0.4619	1.3952	1.8830
1	03	28	02	5.2420	5.6326	6.1588
1	03	28	03	4.4656	4.8088	5.1670
1	03	28	04	1.6244	2.0642	2.4710
1	03	28	05	4.7573	5.1228	5.4353
1	03	28	06	0.7359	1.0774	1.4479
1	03	28	07	4.5204	4.8584	5.2034
1	03	28	08	0.6988	1.0996	1.4470
1	03	28	09	1.5770	1.8726	2.1618

1	03	31	01	0.4050	1.2777	2.1294
1	03	31	02	0.5325	1.3146	2.1939
1	03	31	03	0.2728	0.8712	2.0864
1	03	31	04	1.7060	2.5102	3.3526
1	03	31	05	2.1963	3.0160	3.8560
1	03	31	06	1.4730	2.2690	3.1018
1	03	31	07	1.3998	2.1750	3.0734
1	03	31	08	1.2164	2.0372	2.9276
1	03	31	09	1.2664	2.1256	2.9929
1	03	31	10	1.0158	1.7694	2.6326
1	03	32	01	1.2169	1.9117	2.9029
1	03	32	02	4.6278	5.3502	6.2902
1	03	32	03	1.0985	1.7607	2.7022
1	03	32	04	4.3242	5.0506	6.1058
1	03	32	05	1.0430	1.7294	2.7478
1	03	32	06	4.0871	4.8710	5.9263
1	03	32	07	0.8864	1.6176	2.6305
1	03	32	08	0.8504	1.5402	2.5210
1	03	32	09	4.2030	4.8938	5.8682
1	03	32	10	0.6542	1.4219	2.3354
1	03	33	01	1.0683	2.0300	2.6286
1	03	33	02	1.7330	2.6234	3.2036
1	03	33	03	1.0212	1.8780	2.3910
1	03	33	04	1.7064	2.5341	3.0654
1	03	33	05	1.7624	2.7712	3.4770
1	03	33	06	0.7969	1.7377	2.3929
1	03	33	07	0.8645	1.8067	2.4675
1	03	33	08	2.0144	2.9391	3.5698
1	03	33	09	0.9002	1.8606	2.4661
1	03	33	10	1.0070	1.9310	2.5067
1	03	34	01	0.8382	1.6962	2.4542
1	03	34	02	4.2137	5.0523	5.8314
1	03	34	03	0.5076	1.3399	2.1316
1	03	34	04	4.0958	5.0030	5.7518
1	03	34	05	0.6861	1.3434	2.0476
1	03	34	06	3.8859	4.6541	5.3562
1	03	34	07	4.0696	4.8573	5.5984
1	03	34	08	0.6257	1.4162	2.1161
1	03	34	09	4.1816	5.0496	5.8192
1	03	34	10	0.6821	1.4672	2.2193

1	03	35	01	0.5656	1.3350	2.2154
1	03	35	02	4.0712	4.8772	5.7472
1	03	35	03	0.8667	1.6654	2.6238
1	03	35	04	4.3754	5.0216	6.2214
1	03	35	05	0.7414	1.6066	2.5834
1	03	35	06	4.4470	5.2838	6.2902
1	03	35	07	0.8128	1.5608	2.6018
1	03	35	08	1.0159	1.7388	2.7332

1	03	36	01	1.2084	2.1275	2.8436
1	03	36	02	1.2159	2.0664	2.7671
1	03	36	03	1.4295	2.2995	2.9561
1	03	36	04	2.2432	3.1710	3.9666
1	03	36	05	4.5845	5.5984	6.3700
1	03	36	06	0.8008	1.6192	2.2504
1	03	36	07	0.8464	1.7463	2.3812
1	03	36	08	1.0503	1.9645	2.6322
1	03	36	09	4.4854	5.4893	6.1725
1	03	36	10	0.4674	1.5688	2.2768

1	03	41	01	3.6052	4.0951
1	03	41	02	4.4908	4.9716
1	03	41	03	3.5164	3.9144
1	03	41	04	3.3524	3.8316
1	03	41	05	4.1752	4.6380
1	03	41	06	3.8789	4.2674
1	03	41	07	0.5447	0.9665
1	03	41	08	3.6652	4.0873
1	03	41	09	1.0748	1.5449
1	03	41	10	2.9885	3.3725

1	03	42	01	0.9701	1.3481
1	03	42	02	0.8909	1.3055
1	03	42	03	0.9514	1.3345
1	03	42	04	1.0076	1.4444
1	03	42	05	1.2617	1.6385
1	03	42	06	4.1266	4.5034
1	03	42	07	3.4140	3.7653
1	03	42	08	2.8776	3.2778
1	03	42	09	1.0656	1.4744
1	03	42	10	3.4950	3.9216

1	03	43	01	1.7370	2.0844
1	03	43	02	3.1242	3.4635
1	03	43	03	0.9717	1.3794
1	03	43	04	1.2686	1.6598
1	03	43	05	0.7985	1.2068
1	03	43	06	0.7926	1.1553
1	03	43	07	3.1266	3.4692
1	03	43	08	0.8192	1.2104
1	03	43	09	0.6598	0.8746
1	03	43	10	3.1603	3.5752
1	03	44	01	0.9392	1.0866
1	03	44	02	1.0211	1.1630
1	03	44	03	1.2706	1.4090
1	03	44	04	1.1633	1.3196
1	03	44	05	0.9580	1.1182
1	03	44	06	0.8344	1.0252
1	03	44	07	2.8382	2.9879
1	03	44	08	0.7198	0.8728
1	03	44	09	3.2344	3.3940
1	03	44	10	0.8671	1.0240
1	03	45	01	2.8570	2.9854
1	03	45	02	3.8272	3.9494
1	03	45	03	3.2421	3.3654
1	03	45	04	3.9362	4.0544
1	03	45	05	3.2474	3.3718
1	03	45	06	0.8731	1.0015
1	03	45	07	0.9982	1.1116
1	03	45	08	0.8000	0.9152
1	03	45	09	2.8944	3.0098
1	03	45	10	1.3956	1.4990
1	03	46	01	3.2518	3.3456
1	03	46	02	1.1524	1.2708
1	03	46	03	3.7630	3.8462
1	03	46	04	1.3757	1.6274
1	03	46	05	3.1722	3.2566
1	03	46	06	3.3434	3.4260
1	03	46	07	3.0064	3.0962
1	03	46	08	2.8522	2.9444
1	03	46	09	0.9744	1.0756
1	03	46	10	2.6220	2.6948

1	03	47	01	3.5358	3.9144
1	03	47	02	4.3269	4.6974
1	03	47	03	1.1285	1.5488
1	03	47	04	0.8987	1.2566
1	03	47	05	1.0158	1.4028
1	03	47	06	5.0632	5.5105
1	03	47	07	1.0001	1.3493
1	03	47	08	0.9002	1.3082
1	03	47	09	3.8372	4.1621
1	03	47	10	5.5615	5.8879
1	03	48	01	4.9956	5.2056
1	03	48	02	0.4716	0.6932
1	03	48	03	1.2941	1.5320
1	03	48	04	0.9620	1.1888
1	03	48	05	3.1535	3.3689
1	03	48	06	3.7164	3.9312
1	03	48	07	1.2559	1.4857
1	03	48	08	4.4276	4.6451
1	03	49	01	4.6572	4.8448
1	03	49	02	4.8456	5.0554
1	03	49	03	1.1081	1.3118
1	03	49	04	0.7871	0.9821
1	03	49	05	4.4258	4.6310
1	03	49	06	1.3375	1.5547
1	03	49	07	0.9986	1.2053
1	03	49	08	0.8746	1.0666
1	03	49	09	4.4294	4.6300
1	03	49	10	1.0680	1.2936
1	03	50	01	4.6364	4.8486
1	03	50	02	1.0364	1.2488
1	03	50	03	1.4310	1.6504
1	03	50	04	4.3600	4.5566
1	03	50	05	3.5374	3.7510
1	03	50	06	1.1380	1.3582
1	03	50	07	1.0342	1.2658
1	03	50	08	1.2060	1.4271
1	03	50	09	3.4313	3.6767
1	03	50	10	4.0482	4.2476

1	03	51	01	4.8424	5.0710
1	03	51	02	0.6404	0.8352
1	03	51	03	5.0802	5.3160
1	03	51	04	4.3542	4.5762
1	03	51	05	0.5468	0.7756
1	03	51	06	2.9676	3.1996
1	03	51	07	0.4078	0.6244
1	03	51	08	3.2246	3.4166
1	03	51	09	0.8248	1.0378
1	03	51	10	2.6576	2.8746

1	03	52	01	0.8389	1.0066
1	03	52	02	4.5984	4.7484
1	03	52	03	0.8852	1.1006
1	03	52	04	2.4974	2.6764
1	03	52	05	4.8052	4.9544
1	03	52	06	5.0698	5.2483
1	03	52	07	2.9200	3.1006
1	03	52	08	5.4072	5.5924
1	03	52	09	3.0290	3.2072
1	03	52	10	0.5986	0.7816

1	03	53	01	2.9466	3.1197
1	03	53	02	2.6200	2.7774
1	03	53	03	3.0964	3.2874
1	03	53	04	0.5072	0.7018
1	03	53	05	2.6890	2.8933
1	03	53	06	0.7360	0.8998
1	03	53	07	5.1186	5.2790
1	03	53	08	0.9490	1.1054
1	03	53	09	5.3163	5.6340
1	03	53	10	5.3982	5.5534

1	04	11	01	0.5534	1.5991	2.5250	3.4350	4.2470	5.2807
1	04	11	02	0.6856	1.6246	2.5354	3.5362	4.4504	5.4322
1	04	11	03	1.0824	2.2404	3.3074	4.3287	5.2169	6.3113
1	04	11	04	0.3472	1.4410	2.5190	3.6770	4.8388	5.8098
1	04	11	05	0.6956	1.9053	3.0628	4.1352	5.1080	6.1400
1	04	11	06	0.7379	1.8049	2.8772	3.8955	4.9542	5.8866
1	04	11	07	0.7782	1.6726	2.7798	3.8689	4.9710	6.0196
1	04	11	08	0.6375	1.7697	2.8672	3.8762	5.0162	6.0608
1	04	11	09	0.6554	1.7450	2.8206	3.9042	4.9484	5.9736
1	04	12	01	0.9544	1.9792	2.8664	3.9253	4.9490	5.9162
1	04	12	02	0.7646	1.7705	2.8326	3.8592	4.8504	5.8786
1	04	12	03	0.6768	1.6768	2.6198	3.6502	4.7022	5.7328
1	04	12	04	0.5724	1.5105	2.5182	3.4930	4.5104	5.5384
1	04	12	05	0.6854	1.6642	2.6664	3.7899	4.9400	5.8584
1	04	12	06	0.6270	1.8092	2.9162	4.0160	5.1400	6.0054
1	04	12	07	0.6032	1.5552	2.5684	3.4956	4.5536	5.4582
1	04	12	08	0.6700	1.6642	2.6098	3.4700	4.6580	5.4616
1	04	12	09	0.5554	1.3983	2.3188	3.4044	4.2870	5.2052
1	04	12	10	0.4454	1.2656	2.2688	3.3042	4.3314	5.5660
1	04	13	01	0.3097	1.2766	2.4650	3.4530	4.6126	5.4714
1	04	13	02	0.3454	1.3270	2.4876	3.4886	4.6376	5.5324
1	04	13	03	0.4720	1.4058	2.5967	3.5578	4.6734	5.5873
1	04	13	04	0.4292	1.3773	2.5638	3.5411	4.8966	5.7656
1	04	13	05	0.4686	1.3048	2.3777	3.2917	4.4432	5.3367
1	04	13	06	0.3476	1.4734	2.4846	3.3995	4.5014	5.3790
1	04	13	07	0.3290	1.1278	2.0416	2.9654	3.9514	4.7490
1	04	13	08	0.2714	1.0392	2.0515	2.9464	3.9918	4.7273
1	04	13	09	0.5820	1.5357	2.7074	3.5824	4.7506	5.6488
1	04	13	10	0.5960	1.5814	2.8058	3.5650	4.8020	5.5595
1	04	16	01	0.2942	1.4986	2.7186	3.9650	5.0716	6.1166
1	04	16	02	0.3156	1.4946	2.6740	3.6764	4.7868	5.8324
1	04	16	03	0.3912	1.4654	2.5212	3.5628	4.5846	5.5844
1	04	16	04	0.7518	1.7912	2.6557	3.6092	4.6016	5.5542
1	04	16	05	0.6712	1.6978	2.7038	3.7024	4.8252	5.7422
1	04	16	06	0.7264	1.5890	2.5800	3.5110	4.4780	5.4854
1	04	16	07	0.4740	1.5145	2.5660	3.6566	4.6154	5.5311
1	04	16	08	0.4680	1.4500	2.4888	3.6232	4.6142	5.5428
1	04	16	09	0.3546	1.6379	2.8886	3.7932	4.7436	5.6848
1	04	16	10	0.5950	1.5880	2.5994	3.5504	4.6416	5.6526

1	04	18	01	1.3110	2.0985	2.8162	3.6046	4.3260	5.0385
1	04	18	02	1.1868	1.9972	2.7640	3.5504	4.3340	5.0380
1	04	18	03	0.7842	1.8119	2.5817	3.4034	4.2004	4.9532
1	04	18	04	1.2556	2.0454	2.8155	3.6377	4.3496	5.1628
1	04	18	05	1.1778	1.8951	2.7200	3.4962	4.2855	5.1088
1	04	18	06	0.5182	1.4105	2.2625	3.0778	3.8914	4.6250
1	04	18	07	1.0100	1.7466	2.5134	3.2575	4.0572	4.7124
1	04	18	08	1.0366	1.9007	2.6757	3.4850	4.2739	4.9020
1	04	18	09	1.0986	1.8491	2.6040	3.4456	4.1926	5.0204
1	04	18	10	0.7440	1.5742	2.3024	3.0718	3.8641	4.6764

1	04	21	01	1.0976	1.5632	2.0763
1	04	21	02	3.6110	4.1003	4.6189
1	04	21	03	0.3344	0.8013	1.3004
1	04	21	04	0.4955	1.0380	1.5763
1	04	21	05	0.4045	1.0331	1.5952
1	04	21	06	0.5840	1.0520	1.5537
1	04	21	07	0.4332	0.9561	1.5196
1	04	21	08	0.3026	0.8150	1.3390
1	04	21	09	5.1373	5.6868	6.2251
1	04	21	10	0.3868	0.9634	1.4982

1	04	22	01	0.9152	1.1672	1.4300
1	04	22	02	2.7460	3.0240	3.3444
1	04	22	03	4.8742	5.1618	5.4776
1	04	22	04	0.4150	0.7534	1.0546
1	04	22	05	4.8883	5.2501	5.5661
1	04	22	06	0.2444	0.5503	0.8722
1	04	22	07	0.2894	0.6154	0.9090
1	04	22	08	5.1706	5.5354	5.8326
1	04	22	09	0.7940	1.1843	1.5183
1	04	22	10	0.4854	0.8342	1.1446

1	04	23	01	0.5192	0.8842	1.1112
1	04	23	02	2.6155	3.1145	3.3045
1	04	23	03	5.5860	6.1000	6.3260
1	04	23	04	5.4371	5.8485	6.1476
1	04	23	05	0.1839	0.6644	0.9714
1	04	23	06	5.1917	5.6026	5.8802
1	04	23	07	5.5713	6.0035	6.2544
1	04	23	08	5.1009	5.5529	5.7834
1	04	23	09	0.2578	0.7869	1.0468
1	04	23	10	0.1214	0.5762	0.8774

1	04	24	01	0.4188	0.7903	1.0901
1	04	24	02	5.3662	5.7394	5.8534
1	04	24	03	0.5661	0.9076	1.1535
1	04	24	04	0.7823	1.1893	1.4573
1	04	24	05	5.7518	6.1210	6.3370
1	04	24	06	0.3922	0.7742	0.9485
1	04	24	07	0.4441	0.8941	1.1209
1	04	24	08	0.5026	0.9509	1.2095
1	04	24	09	5.5125	5.9665	6.2875
1	04	24	10	5.3038	5.9246	6.2962

1	04	25	01	0.3310	0.6698	0.9312
1	04	25	02	0.0159	0.2754	0.4905
1	04	25	03	0.0104	0.3492	0.5678
1	04	25	04	0.3330	0.7725	1.0485
1	04	25	05	0.0304	0.3504	0.6104
1	04	25	06	0.2062	0.5464	0.8295
1	04	25	07	0.3966	0.7826	1.0721
1	04	25	08	0.4038	0.7943	1.1244
1	04	25	09	0.3866	0.6866	0.9622

1	04	26	01	0.0893	0.2960	0.4768
1	04	26	02	0.2641	0.4606	0.6325
1	04	26	03	0.1435	0.3496	0.5011
1	04	26	04	0.1981	0.4137	0.5921
1	04	26	05	0.3768	0.6304	0.8692
1	04	26	06	0.2416	0.4342	0.6217
1	04	26	07	0.0405	0.2478	0.4419
1	04	26	08	0.3800	0.7152	0.8916
1	04	26	09	0.4344	0.6354	0.8739
1	04	26	10	0.3660	0.5812	0.8224

1	04	27	01	0.5740	0.8308	1.0952
1	04	27	02	0.5470	0.7856	1.0246
1	04	27	03	0.1914	0.4504	0.6350
1	04	27	04	0.2242	0.4999	0.7177
1	04	27	05	0.6616	0.9560	1.1864
1	04	27	06	0.4917	0.7521	0.9513
1	04	27	07	0.7760	1.0940	1.3810
1	04	27	08	0.7465	1.0381	1.2865
1	04	27	09	0.8697	1.1677	1.3897
1	04	27	10	0.3514	0.6606	0.9149

1	04	28	01	0.5281	0.8224	1.0369
1	04	28	02	0.7084	0.9621	1.1621
1	04	28	03	0.3846	0.5898	0.7539
1	04	28	04	0.3297	0.5295	0.7389
1	04	28	05	0.4429	0.7359	0.9814
1	04	28	06	0.6914	0.9494	1.1942
1	04	28	07	0.9092	1.1792	1.4452
1	04	28	08	1.0697	1.3257	1.5213
1	04	28	09	0.6344	0.9144	1.1516
1	04	28	10	0.4772	0.7556	1.0012
1	04	31	01	0.5138	1.2302	2.0902
1	04	31	02	3.8576	4.6198	5.3694
1	04	31	03	4.0154	4.8510	5.5943
1	04	31	04	0.7075	1.5020	2.2225
1	04	31	05	0.4022	1.3134	2.1358
1	04	31	06	4.0408	4.8821	5.6976
1	04	31	07	0.4830	1.3830	2.2126
1	04	31	08	4.0582	4.9726	5.6958
1	04	32	01	1.4988	2.0231	3.0052
1	04	32	02	0.7388	1.5144	2.6989
1	04	32	03	0.6882	1.4707	2.6072
1	04	32	04	0.4718	1.4592	2.6572
1	04	32	05	0.9465	1.7966	2.9909
1	04	32	06	0.4968	1.2978	2.4502
1	04	32	07	0.7807	1.4696	2.5672
1	04	32	08	0.9376	1.6768	2.6992
1	04	32	09	0.7823	1.7371	2.8572
1	04	32	10	0.8950	1.5750	2.7947
1	04	33	01	0.5643	1.4267	1.9874
1	04	33	02	0.8711	1.8550	2.4339
1	04	33	03	0.5984	1.6968	2.3765
1	04	33	04	0.5712	1.5208	2.1487
1	04	33	05	0.6547	1.5696	2.1548
1	04	33	06	0.6874	1.6884	2.3296
1	04	33	07	0.8933	1.8422	2.3698
1	04	33	08	0.9347	1.9371	2.6029
1	04	33	09	0.7253	1.6780	2.3064
1	04	33	10	0.9109	1.8874	2.4523

1	04	34	01	0.8442	1.9098	3.0208
1	04	34	02	0.7586	1.6336	2.6376
1	04	34	03	1.1104	2.0594	3.2406
1	04	34	04	0.4348	1.3026	2.2298
1	04	34	05	0.4972	1.4452	2.3780
1	04	34	06	0.6973	1.6863	2.6475

1	04	35	01	1.7560	2.9409	4.2477
1	04	35	02	0.5980	1.7922	2.8332
1	04	35	03	0.3787	1.6507	2.7337
1	04	35	04	0.6488	1.9567	2.9738
1	04	35	05	0.5232	1.6340	2.7180
1	04	35	06	1.4501	2.5727	3.5699

1	04	41	01	0.6407	0.9961
1	04	41	02	0.8234	1.1801
1	04	41	03	0.7210	1.0288
1	04	41	04	0.5748	0.8865
1	04	41	05	5.8319	6.2288
1	04	41	06	2.4138	2.7774
1	04	41	07	0.5553	0.8514
1	04	41	08	0.6424	0.9832
1	04	41	09	1.0096	1.3042
1	04	41	10	5.5811	5.9135

1	04	42	01	3.0898	3.3919
1	04	42	02	5.1781	5.5282
1	04	42	03	5.3593	5.6293
1	04	42	04	0.9591	1.2666
1	04	42	05	0.3946	0.7240
1	04	42	06	1.0648	1.3429
1	04	42	07	3.0421	3.3229
1	04	42	08	0.8393	1.1240
1	04	42	09	5.2255	5.5315
1	04	42	10	3.0342	3.3525

1	04	43	01	5.4426	5.7453
1	04	43	02	5.8324	6.1150
1	04	43	03	3.2176	3.5216
1	04	43	04	4.5284	4.8272
1	04	43	05	3.5701	3.8443
1	04	43	06	0.8255	1.1270
1	04	43	07	3.0627	3.3729
1	04	43	08	2.9258	3.2225
1	04	43	09	0.6447	0.9375
1	04	43	10	5.2937	5.5637

1	04	44	01	1.1775	1.3650
1	04	44	02	5.8443	5.9799
1	04	44	03	5.9374	6.0826
1	04	44	04	5.4743	5.5670
1	04	44	05	6.0272	6.1166
1	04	44	06	1.0617	1.2321
1	04	44	07	3.3145	3.4540
1	04	44	08	0.8872	1.0333
1	04	44	09	1.0753	1.2022

1	04	45	01	3.4313	3.5627
1	04	45	02	1.3521	1.5156
1	04	45	03	0.9597	1.1054
1	04	45	04	5.1418	5.2939
1	04	45	05	5.5893	5.7006
1	04	45	06	3.1386	3.2682
1	04	45	07	5.4599	5.5742
1	04	45	08	3.6120	3.8474
1	04	45	09	0.9635	1.1792
1	04	45	10	5.2579	5.4391

1	04	46	01	0.9812	1.1270
1	04	46	02	3.5019	3.6111
1	04	46	03	0.7578	0.8772
1	04	46	04	3.4422	3.5326
1	04	46	05	2.8202	2.9087
1	04	46	06	0.7624	0.8898
1	04	46	07	1.0300	1.1378
1	04	46	08	2.8716	2.9564
1	04	46	09	5.8758	5.9590
1	04	46	10	2.9952	3.0864

1	04	47	01	0.8774	1.2859
1	04	47	02	0.8594	1.2790
1	04	47	03	4.0483	4.4620
1	04	47	04	0.7724	1.2214
1	04	47	05	1.0228	1.5023
1	04	47	06	4.4718	4.9390
1	04	47	07	4.1777	4.6800
1	04	47	08	3.5005	3.9882
1	04	47	09	1.1106	1.5886
1	04	47	10	4.5565	5.0548
1	04	48	01	1.1372	1.3436
1	04	48	02	1.0126	1.2301
1	04	48	03	0.5893	0.8347
1	04	49	01	4.6269	4.8859
1	04	49	02	4.3352	4.5424
1	04	49	03	3.1663	3.3922
1	04	49	04	1.1213	1.3538
1	04	49	05	3.7252	3.9476
1	04	49	06	1.1306	1.3979
1	04	49	07	1.2444	1.5036
1	04	49	08	1.0072	1.2532
1	04	50	01	3.4068	3.6354
1	04	50	02	3.6678	3.8841
1	04	50	03	1.3506	1.5708
1	04	50	04	1.0330	1.2504
1	04	50	05	4.3370	4.5800
1	04	50	06	0.9068	1.1357
1	04	50	07	4.0722	4.3038
1	04	50	08	0.9944	1.2356
1	04	50	09	3.6609	3.9024

1	04	51	01	2.9084	3.1409
1	04	51	02	5.4759	5.7027
1	04	51	03	3.2459	3.4454
1	04	51	04	5.6867	5.8292
1	04	51	05	2.9894	3.1643
1	04	51	06	5.6181	5.7900
1	04	51	07	0.7082	0.8884
1	04	51	08	0.7720	0.9630
1	04	51	09	0.8260	0.9878
1	04	51	10	0.5702	0.7676

1	04	52	01	2.8849	3.0176
1	04	52	02	5.1878	5.2973
1	04	52	03	3.0945	3.2940
1	04	52	04	5.2408	5.4174
1	04	52	05	1.1315	1.2389
1	04	52	06	1.2823	1.4750
1	04	52	07	4.7405	4.9538
1	04	52	08	2.6847	2.9361
1	04	52	09	4.7599	4.9432
1	04	52	10	2.9005	3.0807

1	04	53	01	4.6225	4.9183
1	04	53	02	0.8408	0.9482
1	04	53	03	0.8704	0.9643
1	04	53	04	0.9020	1.0304
1	04	53	05	3.3639	3.4388
1	04	53	06	0.9354	1.0303
1	04	53	07	3.5078	3.6641
1	04	53	08	2.5976	2.7674
1	04	53	09	4.9764	5.1411
1	04	53	10	2.7896	2.9474

1	05	11	01	0.3129	1.2150	2.0989	3.1262	4.1658	5.1933
1	05	11	02	0.4244	1.3472	2.2471	3.2765	4.4013	5.3341
1	05	11	03	0.3405	1.2258	2.2254	3.2909	4.3007	5.2919
1	05	11	04	0.4243	1.4134	2.3946	3.3946	4.3648	5.3247
1	05	11	05	0.3784	1.3420	2.3573	3.3386	4.3000	5.3768
1	05	11	06	0.2376	1.1860	2.2686	3.1451	4.1602	5.1626
1	05	11	07	0.4585	1.4707	2.4952	3.4478	4.3986	5.4531
1	05	11	08	0.4450	1.4762	2.4068	3.4365	4.3492	5.3444
1	05	11	09	0.4642	1.3856	2.2477	3.2136	4.2058	5.2523
1	05	11	10	0.4436	1.4073	2.4164	3.3802	4.3146	5.2618
1	05	12	01	0.4730	1.4044	2.3906	3.4212	4.3946	5.3924
1	05	12	02	1.2090	2.1730	3.1342	4.0926	5.2035	6.0780
1	05	12	03	0.3504	1.2398	2.2955	3.1984	4.1565	5.1816
1	05	12	04	0.6639	1.6185	2.4316	3.3723	4.3695	5.3616
1	05	12	05	0.5504	1.4557	2.3239	3.3960	4.2801	5.2870
1	05	12	06	0.5124	1.4643	2.3997	3.3764	4.3966	5.5035
1	05	12	07	1.1508	2.1753	3.0790	4.0330	5.0136	6.0124
1	05	12	08	1.2718	2.1738	3.1480	4.1554	5.1163	6.1448
1	05	12	09	1.2436	2.1856	3.1823	4.1668	5.0806	6.0694
1	05	12	10	1.3253	2.2194	3.1745	4.1589	5.1208	6.0664
1	05	13	01	0.3942	1.3577	2.3384	3.1986	4.1776	5.1361
1	05	13	02	0.6427	1.4941	2.5201	3.5484	4.4797	5.3843
1	05	13	03	0.3375	1.1857	2.2155	3.1368	4.1097	5.0543
1	05	13	04	0.6606	1.5784	2.6316	3.6852	4.6521	5.4912
1	05	13	05	0.5420	1.4607	2.4382	3.3199	4.3690	5.2568
1	05	13	06	0.7223	1.6508	2.6550	3.4612	4.7034	5.5730
1	05	13	07	0.6482	1.4664	2.4483	3.4364	4.4008	5.3992
1	05	13	08	0.4907	1.4662	2.4313	3.3374	4.4723	5.3475
1	05	13	09	0.4762	1.3764	2.3257	3.4401	4.4206	5.3777
1	05	13	10	0.4374	1.2670	2.2754	3.1908	4.2264	5.2609
1	05	16	01	0.6328	1.6896	2.5910	3.5716	4.5496	5.5718
1	05	16	02	1.1812	2.2496	3.1890	4.2184	5.1800	6.1372
1	05	16	03	1.3144	2.2388	3.2258	4.2298	5.1712	6.1320
1	05	16	04	1.3250	2.3146	3.2814	4.2060	5.1996	6.1980
1	05	16	05	1.4258	2.3950	3.3760	4.3176	5.2776	6.2711
1	05	16	06	1.2862	2.3204	3.2756	4.2638	5.2108	6.2082
1	05	16	07	1.2512	2.1936	3.1844	4.2260	5.1730	6.1316
1	05	16	08	1.4272	2.4348	3.4360	4.3586	5.2850	6.2900
1	05	16	09	1.3634	2.3216	3.2682	4.2480	5.2180	6.2458
1	05	16	10	1.2234	2.1622	3.1752	4.1334	5.1232	6.0502

1	05	18	01	1.1758	1.9070	2.6622	3.3272	4.1242	4.8774
1	05	18	02	1.2620	2.0424	2.8178	3.5272	4.2896	4.9890
1	05	18	03	1.0840	1.8036	2.6168	3.3768	4.1166	4.8606
1	05	18	04	1.0662	1.7440	2.4798	3.2512	3.9592	4.7672
1	05	18	05	1.1164	1.8322	2.5928	3.3510	4.1114	4.8114
1	05	18	06	0.3476	1.0508	1.8021	2.5418	3.2952	4.0168
1	05	18	07	1.1566	1.8792	2.6274	3.3784	4.1710	4.8350
1	05	18	08	1.1808	1.8296	2.6414	3.3918	4.1051	4.8468
1	05	18	09	1.1790	1.9142	2.6742	3.3924	4.1414	4.9280
1	05	18	10	1.0584	1.7920	2.5314	3.3030	4.0828	4.8362

1	05	21	01	1.1205	1.6420	2.1440
1	05	21	02	3.6552	4.1622	4.6602
1	05	21	03	3.2378	3.6920	4.1678
1	05	21	04	0.7286	1.2302	1.7156
1	05	21	05	2.8665	3.3726	3.8773
1	05	21	06	3.4110	3.9283	4.4645
1	05	21	07	0.5652	1.0881	1.5858
1	05	21	08	5.0546	5.4930	6.0216
1	05	21	09	0.7624	1.2460	1.7320
1	05	21	10	0.4592	0.9656	1.4432

1	05	22	01	0.9005	1.2325	1.5810
1	05	22	02	3.2241	3.5565	3.9030
1	05	22	03	2.8469	3.1799	3.5534
1	05	22	04	3.1271	3.4786	3.8396
1	05	22	05	5.2714	5.6440	6.0182
1	05	22	06	0.4606	0.8461	1.2146
1	05	22	07	3.0206	3.3626	3.7201
1	05	22	08	3.0569	3.3803	3.6956
1	05	22	09	4.9365	5.2670	5.6265
1	05	22	10	0.3243	0.6523	1.0278

1	05	23	01	0.9542	1.4602	1.7422
1	05	23	02	3.0859	3.5359	3.8694
1	05	23	03	0.7770	1.2372	1.6032
1	05	23	04	0.8891	1.3746	1.7166
1	05	23	05	5.4844	5.9767	6.2969
1	05	23	06	4.8171	5.2941	5.6226
1	05	23	07	0.7748	1.2326	1.5984
1	05	23	08	0.5361	1.0407	1.3701
1	05	23	09	2.5945	3.0895	3.4135
1	05	23	10	0.3950	0.9182	1.2502

1	05	24	01	0.9512	1.2592	1.7682
1	05	24	02	3.1794	3.5019	4.0244
1	05	24	03	2.8257	3.1322	3.6032
1	05	24	04	0.7372	1.0216	1.4932
1	05	24	05	3.4698	3.8194	4.3588
1	05	24	06	5.4448	5.8060	6.2970
1	05	24	07	0.9992	1.3598	1.8398
1	05	24	08	0.6684	0.9691	1.4344
1	05	24	09	3.3422	3.6312	4.0852
1	05	24	10	0.6449	1.0079	1.4809
1	05	25	01	0.5332	0.8977	1.1842
1	05	25	02	0.8891	1.5534	1.9531
1	05	25	03	3.6145	4.0110	4.3215
1	05	25	04	3.5506	4.0706	4.3784
1	05	25	05	0.8806	1.3021	1.5946
1	05	25	06	1.6326	1.9986	2.2956
1	05	25	07	2.9686	3.3026	3.5816
1	05	25	08	0.9342	1.2657	1.5687
1	05	25	09	4.9620	5.2388	5.4784
1	05	26	01	3.5492	3.8994	4.1762
1	05	26	02	0.7757	1.0010	1.2278
1	05	26	03	0.7110	0.9087	1.0929
1	05	26	04	4.0734	4.3178	4.5322
1	05	26	05	0.9694	1.1906	1.4406
1	05	26	06	0.7606	0.9764	1.2044
1	05	26	07	3.3018	3.5898	3.8180
1	05	26	08	0.8442	1.0800	1.2965
1	05	26	09	4.1142	4.4170	4.6630
1	05	26	10	4.4244	4.7398	4.9914
1	05	27	01	1.0821	1.5121	1.7741
1	05	27	02	3.9132	4.1906	4.4540
1	05	27	03	3.6130	4.0975	4.3616
1	05	27	04	1.1320	1.5970	1.8435
1	05	27	05	3.6120	3.9456	4.1560
1	05	27	06	3.7194	4.0696	4.3038
1	05	27	07	1.0341	1.4736	1.7416
1	05	27	08	1.2516	1.6576	1.9281
1	05	27	09	1.7262	2.0510	2.2782
1	05	27	10	3.9752	4.3236	4.5544

1	05	28	01	4.2183	4.6081	4.9390
1	05	28	02	5.0696	5.4296	5.7144
1	05	28	03	1.1990	1.5775	1.8575
1	05	28	04	4.1560	4.5032	4.7720
1	05	28	05	1.3490	1.6910	1.9558
1	05	28	06	1.1516	1.5106	1.7851
1	05	28	07	1 9351	2.3651	2.6861
1	05	28	08	0.8525	1.1963	1.4618
1	05	28	09	3.2768	3.6548	3.9424
1	05	28	10	2.8216	3.1771	3.4875

1	05	31	01	0.5562	1.3042	2.0098
1	05	31	02	3.7207	4.5901	5.2978
1	05	31	03	0.4337	1.2828	2.0143
1	05	31	04	3.6837	4.4341	5.1362
1	05	31	05	0.8042	1.5161	2.2140
1	05	31	06	4.0294	4.7840	5.4903
1	05	31	07	0.4113	1.2856	2.0542
1	05	31	08	3.7433	4.4482	5.1594
1	05	31	09	0.4497	1.1714	1.8476
1	05	31	10	3.2051	3.9185	4.5725

1	05	32	01	0.8943	1.5932	2.5228
1	05	32	02	4.1136	4.8448	5.9432
1	05	32	03	0.6400	1.3960	2.3448
1	05	32	04	4.4520	5.1848	6.1656
1	05	32	05	0.5692	1.3052	2.2788
1	05	32	06	4.1944	4.9984	6.0944
1	05	32	07	0.8847	1.6497	2.8260
1	05	32	08	0.9090	1.7775	2.7999
1	05	32	09	4.4170	5.2554	6.1730
1	05	32	10	0.6318	1.3998	2.4398

1	05	33	01	0.8414	1.8571	2.4549
1	05	33	02	3.9494	5.0654	5.7478
1	05	33	03	0.5264	1.6552	2.3264
1	05	33	04	3.8389	4.9891	5.8018
1	05	33	05	0.3566	1.6718	2.3118
1	05	33	06	3.9322	5.2129	5.8690
1	05	33	07	0.4833	1.7838	2.4102
1	05	33	08	3.9310	5.0094	5.6998
1	05	33	09	0.5924	1.6828	2.3348
1	05	33	10	3.7352	4.8272	5.5304

1	05	34	01	0.5021	1.5362	2.5667
1	05	34	02	0.7888	1.8319	2.8444
1	05	34	03	0.8656	1.8646	2.9032
1	05	34	04	0.8057	1.8308	2.8406
1	05	34	05	0.5122	1.6802	2.8052
1	05	34	06	0.6237	1.6290	2.6694
1	05	34	07	1.0107	2.0385	3.0753
1	05	34	08	0.6149	1.6202	2.6606
1	05	34	09	0.5073	1.5180	2.5377
1	05	34	10	0.5083	1.4803	2.5027
1	05	35	01	0.5264	1.4752	2.3976
1	05	35	02	1.0530	2.0106	2.9266
1	05	35	03	0.5728	1.5898	2.5597
1	05	35	04	0.7673	1.7134	2.7007
1	05	35	05	0.9148	1.8932	2.8236
1	05	35	06	0.8262	1.7902	2.7478
1	05	35	07	0.6328	1.5696	2.5016
1	05	35	08	0.7394	1.6426	2.6010
1	05	35	09	0.8706	1.8082	2.7466
1	05	35	10	1.1652	2.1291	3.0597
1	05	36	01	0.8475	1.7731	2.7779
1	05	36	02	1.0059	1.9307	2.8971
1	05	36	03	0.9492	1.8484	2.7692
1	05	36	04	0.8490	1.7610	2.6818
1	05	36	05	1.0444	1.9260	2.8564
1	05	36	06	0.8162	1.7418	2.6626
1	05	36	07	0.9200	1.7884	2.6556
1	05	36	08	0.6300	1.5228	2.4156
1	05	36	09	0.9496	1.8416	2.7584
1	05	36	10	0.6390	1.5494	2.4486
1	05	41	01	3.4472	3.7948	
1	05	41	02	3.3077	3.6464	
1	05	41	03	3.2676	3.6201	
1	05	41	04	0.9006	1.2426	
1	05	41	05	0.7652	1.1604	
1	05	41	06	3.1327	3.4831	
1	05	41	07	1.2055	1.5394	
1	05	41	08	0.6651	1.0314	
1	05	41	09	3.3129	3.7092	
1	05	41	10	1.1960	1.5632	

1	05	42	01	0.8496	1.1742
1	05	42	02	1.3872	1.6500
1	05	42	03	0.8109	1.1067
1	05	42	04	3.5342	3.8546
1	05	42	05	2.8488	3.1446
1	05	42	06	3.7024	4.0544
1	05	42	07	0.8787	1.1967
1	05	42	08	3.3888	3.7338
1	05	42	09	1.0833	1.3671
1	05	42	10	1.1621	1.5212
1	05	43	01	0.9355	1.1965
1	05	43	02	1.3872	1.6500
1	05	43	03	1.1090	1.4204
1	05	43	04	3.5941	3.8674
1	05	43	05	1.1321	1.4291
1	05	43	06	0.6816	0.9849
1	05	43	07	3.6874	4.0105
1	05	43	08	1.1088	1.4487
1	05	43	09	3.7166	3.9947
1	05	43	10	3.0689	3.3614
1	05	44	01	6.1488	6.3207
1	05	44	02	0.7139	0.8306
1	05	44	03	0.9951	1.1580
1	05	44	04	5.8891	6.0409
1	05	44	05	0.9758	1.1219
1	05	44	06	6.1004	6.2534
1	05	44	07	2.9792	3.1364
1	05	44	08	1.0860	1.2321
1	05	44	09	0.8234	0.9599
1	05	44	10	5.4046	5.5324
1	05	45	01	3.4366	3.5536
1	05	45	02	1.1059	1.2478
1	05	45	03	2.7263	2.8592
1	05	45	04	5.7539	5.8655
1	05	45	05	5.6899	5.7955
1	05	45	06	3.6358	3.7645
1	05	45	07	0.5692	0.7000
1	05	45	08	5.4278	5.5676
1	05	45	09	3.1485	3.2592
1	05	45	10	3.0846	3.1875

1	05	46	01	3.4922	3.5760
1	05	46	02	4.9493	5.0432
1	05	46	03	3.4622	3.5802
1	05	46	04	3.4054	3.4998
1	05	46	05	3.0853	3.1858
1	05	46	06	0.9026	0.9887
1	05	46	07	5.1126	5.2130
1	05	46	08	1.1725	1.2607
1	05	46	09	4.0121	4.1072
1	05	46	10	0.7245	0.8124
1	05	47	01	4.4755	5.1360
1	05	47	02	0.7752	1.2762
1	05	47	03	4.1734	4.7919
1	05	47	04	4.3427	4.8322
1	05	47	05	1.0813	1.5738
1	05	47	06	1.7486	2.2098
1	05	47	07	4.7528	5.2083
1	05	47	08	4.3378	4.8328
1	05	47	09	0.7026	1.1062
1	05	47	10	3.7000	4.2060
1	05	48	01	0.7338	0.9918
1	05	48	02	3.7690	4.0267
1	05	48	03	3.4180	3.6936
1	05	48	04	0.4950	0.7666
1	05	48	05	0.6142	0.9042
1	05	48	06	4.4020	4.6654
1	05	48	07	0.8978	1.1675
1	05	48	08	1.3262	1.5974
1	05	48	09	0.8777	1.1591
1	05	48	10	0.7158	0.9780
1	05	49	01	0.7963	1.0348
1	05	49	02	0.6859	0.9364
1	05	49	03	0.9868	1.2400
1	05	49	04	3.5366	3.7910
1	05	49	05	0.9180	1.1574
1	05	49	06	0.6996	0.9552
1	05	49	07	4.3402	4.6477
1	05	49	08	3.5087	3.7784
1	05	49	09	2.9589	3.2283
1	05	49	10	0.5554	0.8298

1	05	50	01	1.0202	1.2602
1	05	50	02	3.1835	3.4370
1	05	50	03	3.4344	3.7060
1	05	50	04	0.7041	0.9804
1	05	50	05	3.9342	4.1970
1	05	50	06	3.6936	3.9294
1	05	50	07	0.5598	0.8325
1	05	50	08	0.5095	0.7621
1	05	50	09	3.5552	3.8524
1	05	50	10	3.3925	3.6346

1	05	51	01	0.7000	0.8846
1	05	51	02	4.6164	4.8432
1	05	51	03	5.4980	5.7480
1	05	51	04	0.8544	1.1262
1	05	51	05	4.7053	4.9621
1	05	51	06	0.6376	0.9050
1	05	51	07	3.0042	3.2344
1	05	51	08	2.8789	3.1186
1	05	51	09	0.5564	0.8058
1	05	51	10	2.6158	2.8494

1	05	52	01	4.8252	5.0498
1	05	52	02	2.5910	2.7614
1	05	52	03	0.9330	1.2024
1	05	52	04	5.0294	5.2955
1	05	52	05	0.6114	0.8784
1	05	52	06	2.8061	3.0464
1	05	52	07	5.1906	5.4430
1	05	52	08	0.6798	0.9252
1	05	52	09	2.6976	2.9378
1	05	52	10	4.8678	5.0946

1	05	53	01	2.7252	2.9020
1	05	53	02	0.6830	0.9064
1	05	53	03	3.1508	3.3868
1	05	53	04	2.9810	3.2224
1	05	53	05	2.5748	2.8276
1	05	53	06	4.9165	5.1328
1	05	53	07	0.8796	1.0916
1	05	53	08	4.9890	5.2296
1	05	53	09	4.7084	4.9378
1	05	53	10	0.7242	0.9838

1	06	11	01	1.3322	2.4428	3.5442	4.5898	5.5538	6.5456
1	06	11	02	0.3069	1.2125	2.0959	3.0002	3.9122	4.9653
1	06	11	03	0.6019	1.5525	2.4750	3.4150	4.3894	5.4187
1	06	11	04	0.9042	1.7944	2.7069	3.6375	4.5906	5.6181
1	06	11	05	1.4414	2.3333	3.3109	4.2794	4.2783	5.2920
1	06	11	06	0.7777	1.6931	2.5733	3.4758	4.4503	5.3902
1	06	11	07	0.4303	1.3341	2.3053	3.3016	4.2056	5.1455
1	06	11	08	1.0994	2.0209	2.9709	3.9277	4.8866	5.8248
1	06	11	09	2.4660	3.3566	4.2970	5.2005	6.0866	7.0414
1	06	12	01	0.6002	1.5039	2.4917	3.4363	4.3520	5.3589
1	06	12	02	0.6081	1.5320	2.5059	3.5009	4.4264	5.4342
1	06	12	03	0.8475	1.7372	2.6997	3.6816	4.6378	5.6245
1	06	12	04	0.7100	1.6198	2.4156	3.3747	4.3025	5.2356
1	06	12	05	0.5128	1.5666	2.4856	3.5325	4.5159	5.5233
1	06	12	06	1.0208	2.0513	3.0169	4.0387	4.9214	5.8786
1	06	12	07	0.6167	1.5311	2.5944	3.6431	4.6066	5.5578
1	06	12	08	4.3275	5.2862	6.2478	7.2066	8.1233	9.1255
1	06	12	09	1.6681	2.7562	3.7275	4.7544	5.7525	6.6981
1	06	12	10	1.3628	2.3514	3.2944	4.2312	5.1495	6.0622
1	06	13	01	0.5844	1.6539	2.5131	3.5236	4.5128	5.4152
1	06	13	02	1.6150	2.4813	3.3569	4.2919	5.1881	6.0425
1	06	13	03	1.1714	2.0072	2.9184	3.7856	4.7648	5.6606
1	06	13	04	1.3716	2.2392	3.1808	4.2327	5.1544	6.1350
1	06	13	05	1.6263	2.4819	3.3406	4.2469	5.2067	6.1362
1	06	13	06	0.7766	1.7928	2.8581	3.8256	4.8019	5.7494
1	06	13	07	0.8297	1.7405	2.6555	3.5325	4.5713	5.4372
1	06	13	08	0.7147	1.6222	2.5475	3.4172	4.3947	5.3891
1	06	13	09	1.3519	2.2303	3.2936	4.2736	5.2833	6.2927
1	06	13	10	1.5741	2.4681	3.3369	4.1900	5.2025	6.1572
1	06	16	01	0.7086	1.6686	2.5794	3.5469	4.5269	5.4998
1	06	16	02	1.9911	2.9628	4.0450	5.1119	6.0564	6.9472
1	06	16	03	0.7287	1.6061	2.5045	3.4814	4.4891	5.5203
1	06	16	04	2.9806	3.8731	4.7544	5.7400	6.6984	7.6786
1	06	16	05	1.4014	2.2372	3.0717	3.9300	4.7691	5.7258
1	06	16	06	1.3716	2.2617	3.1525	4.0469	4.9359	5.7431
1	06	16	07	1.6838	2.5059	3.3373	4.2191	5.0736	6.0008
1	06	16	08	0.3328	1.1869	2.0922	3.0903	3.9530	4.9341
1	06	16	09	2.3009	3.1686	4.1030	5.0728	5.9103	6.9841
1	06	16	10	3.5130	4.3708	5.2919	6.2434	7.1530	8.0431

1	06	18	01	1.5381	2.2800	2.9491	3.6838	4.4042	5.1667
1	06	18	02	0.3631	1.1053	1.8178	2.5778	3.2775	4.0069
1	06	18	03	0.5375	1.2781	2.0009	2.7952	3.5181	4.2863
1	06	18	04	5.1000	5.8947	6.7058	7.4833	8.2302	9.0233
1	06	18	05	0.6803	1.4369	2.1578	2.8053	3.5141	4.2056
1	06	18	06	0.7305	1.5283	2.3511	3.1156	3.8309	4.5609
1	06	18	07	0.9937	1.7648	2.5983	3.3952	4.1759	4.9789
1	06	18	08	5.8863	6.6531	7.4244	8.1847	8.9370	9.6994
1	06	18	09	1.9423	2.7575	3.5005	4.2236	4.9727	5.6856
1	06	18	10	0.5434	1.3300	2.0800	2.8420	3.5741	4.3263

1	06	21	01	0.5822	1.0970	1.6490
1	06	21	02	0.6081	1.1550	1.7052
1	06	21	03	3.3456	3.8172	4.3614
1	06	21	04	0.7161	1.2985	1.8683
1	06	21	05	3.2802	3.7992	4.3350
1	06	21	06	3.3100	3.8110	4.2904
1	06	21	07	0.7748	1.3028	1.8254
1	06	21	08	2.5634	3.0702	3.6316
1	06	21	09	0.3047	0.8906	1.4618
1	06	21	10	2.6725	3.2332	3.8338

1	06	22	01	0.4288	0.7633	1.0870
1	06	22	02	2.4684	2.7612	3.0741
1	06	22	03	3.7587	4.1037	4.4477
1	06	22	04	3.0832	3.3872	3.7344
1	06	22	05	0.5376	0.8608	1.1620
1	06	22	06	0.9802	1.3270	1.6658
1	06	22	07	3.3396	3.6512	3.9696
1	06	22	08	0.5640	0.8910	1.2240
1	06	22	09	0.3716	0.7002	1.0302
1	06	22	10	4.9244	5.2720	5.5980

1	06	23	01	1.1046	1.6010	1.8170
1	06	23	02	3.3581	4.0191	4.2781
1	06	23	03	4.9298	5.4798	5.7714
1	06	23	04	5.1788	5.6943	5.9448
1	06	23	05	0.3997	0.9052	1.1552
1	06	23	06	0.7468	1.2523	1.4978
1	06	23	07	0.9811	1.5637	1.8385
1	06	23	08	3.0800	3.6040	3.8560
1	06	23	09	2.5478	3.0048	3.2418
1	06	23	10	0.3965	0.9490	1.2077

1	06	24	01	1.3532	1.6736	2.2928
1	06	24	02	0.8712	1.1436	1.8522
1	06	24	03	3.6445	3.9565	4.6309
1	06	24	04	1.0682	1.3268	1.9502
1	06	24	05	2.9246	3.2021	3.8031
1	06	24	06	2.6856	2.9251	3.5061
1	06	24	07	3.2302	3.4877	4.1042
1	06	24	08	4.8406	5.1351	5.7136
1	06	24	09	0.8290	1.3264	1.7938
1	06	24	10	3.3366	3.8670	4.3902
1	06	25	01	5.2821	5.6111	5.9191
1	06	25	02	0.9773	1.3348	1.6253
1	06	25	03	1.3799	1.6764	1.9339
1	06	25	04	3.7732	4.1332	4.4136
1	06	25	05	5.0065	5.2795	5.5312
1	06	25	06	3.8506	4.1530	4.4226
1	06	25	07	4.6922	4.9902	5.2710
1	06	25	08	0.9592	1.3952	1.7387
1	06	25	09	4.0424	4.3989	4.6974
1	06	25	10	0.8513	1.2293	1.5108
1	06	26	01	1.0954	1.3518	1.5806
1	06	26	02	5.1772	5.4748	5.6860
1	06	26	03	4.3708	4.6432	4.8380
1	06	26	04	0.8086	1.0369	1.2199
1	06	26	05	4.6101	4.8276	5.0296
1	06	26	06	3.2048	3.4340	3.6592
1	06	26	07	0.8138	1.0358	1.2350
1	06	26	08	4.0620	4.2968	4.5556
1	06	26	09	0.9906	1.2162	1.4418
1	06	26	10	0.4182	0.7487	1.0277
1	06	27	01	0.6415	1.4283	1.7664
1	06	27	02	1.7730	2.3952	2.7348
1	06	27	03	1.7708	2.5842	2.9160
1	06	27	04	3.2867	3.9533	4.2773
1	06	27	05	1.2421	1.9841	2.3299
1	06	27	06	0.6992	1.2860	1.6454
1	06	27	07	0.6775	1.3921	1.7179
1	06	27	08	3.8250	4.4940	4.8318
1	06	27	09	0.8775	1.4031	1.6899
1	06	27	10	3.1622	3.8629	4.2066

1	06	28	01	4.1352	4.6808	5.4472
1	06	28	02	3.4496	3.9928	4.6753
1	06	28	03	4.3526	5.0016	6.2138
1	06	28	04	0.4739	0.9604	1.5862
1	06	28	05	1.2078	1.7370	2.7299
1	06	28	06	0.8428	1.4608	2.5818
1	06	28	07	1.1381	1.6533	2.2427
1	06	28	08	0.5408	1.2272	1.9000
1	06	28	09	3.7882	4.2072	4.5742
1	06	28	10	1.0280	1.7048	2.3504
1	06	31	01	0.4525	1.2416	1.9892
1	06	31	02	4.3278	5.1614	5.9575
1	06	31	03	1.3288	2.1522	2.9639
1	06	31	04	5.2344	6.0313	6.8133
1	06	31	05	1.4550	2.2386	3.0105
1	06	31	06	5.4583	6.2278	6.9950
1	06	31	07	1.5323	2.2566	2.9909
1	06	31	08	5.3647	6.1241	6.8559
1	06	31	09	1.5936	2.3998	3.1537
1	06	31	10	5.7309	6.5964	7.3394
1	06	32	01	1.1460	1.8277	2.7760
1	06	32	02	0.7998	1.5138	2.6766
1	06	32	03	1.0702	1.7875	3.0042
1	06	32	04	0.3863	1.1113	2.0980
1	06	32	05	1.1794	2.0025	2.9925
1	06	32	06	1.4613	2.2088	3.2241
1	06	32	07	1.2178	1.9339	2.9058
1	06	32	08	1.1503	1.8680	2.8414
1	06	32	09	1.2859	1.9877	2.9259
1	06	32	10	1.8498	2.3444	3.6016
1	06	33	01	0.6625	1.7109	2.4711
1	06	33	02	4.9198	5.9745	6.7175
1	06	33	03	1.3416	2.4319	3.1894
1	06	33	04	5.9661	6.9786	7.6270
1	06	33	05	1.7391	2.7441	3.3975
1	06	33	06	6.5647	7.5616	8.2397
1	06	33	07	1.5323	2.5511	3.2261
1	06	33	08	5.5395	6.5380	7.2030
1	06	33	09	4.8228	5.8791	6.5559
1	06	33	10	1.6789	2.6570	3.3117

1	06	34	01	0.5983	1.4581	2.3566
1	06	34	02	4.4897	5.3620	6.1686
1	06	34	03	1.0847	1.9784	2.8777
1	06	34	04	1.6275	2.6044	3.5287
1	06	34	05	5.8412	6.7787	7.6881
1	06	34	06	1.1431	1.9955	2.8884
1	06	34	07	4.7578	5.6597	6.5353
1	06	34	08	1.2319	2.3475	3.3395
1	06	34	09	5.6381	6.6950	7.6706
1	06	34	10	1.3469	2.3359	3.2997
1	06	35	01	0.2934	1.3575	2.4609
1	06	35	02	0.9617	2.0173	3.0870
1	06	35	03	1.2122	2.2425	3.3356
1	06	35	04	4.9994	5.9491	6.9822
1	06	35	05	0.7191	1.6800	2.7234
1	06	35	06	0.9491	1.9156	2.9619
1	06	35	07	4.8988	5.8063	6.8403
1	06	35	08	0.9356	1.8325	2.8122
1	06	35	09	0.9412	1.9350	2.8697
1	06	35	10	4.7309	5.7547	6.8009
1	06	36	01	0.6494	1.7433	2.7258
1	06	36	02	4.8789	6.0095	6.9461
1	06	36	03	0.7492	1.8391	2.6006
1	06	36	04	4.9494	6.0580	6.8197
1	06	36	05	4.7805	5.7828	6.4617
1	06	36	06	4.7864	5.7911	6.4622
1	06	36	07	1.1550	2.1363	2.7784
1	06	36	08	4.7148	5.7609	6.4180
1	06	36	09	1.1744	2.3322	2.9986
1	06	36	10	5.1166	6.2439	6.8994
1	06	41	01	1.3552	1.7412	
1	06	41	02	5.8688	6.2384	
1	06	41	03	5.4555	5.8098	
1	06	41	04	4.3572	4.7284	
1	06	41	05	3.2348	3.6292	
1	06	41	06	5.4416	5.8264	
1	06	41	07	1.4068	1.8180	
1	06	41	08	3.5506	3.9126	
1	06	41	09	0.8619	1.2261	
1	06	41	10	3.0111	3.3771	

1	06	42	01	0.7520	1.1132
1	06	42	02	3.6524	3.9785
1	06	42	03	0.7100	1.0708
1	06	42	04	3.0168	3.3696
1	06	42	05	0.8213	1.2203
1	06	42	06	5.7775	6.1969
1	06	42	07	1.1643	1.5639
1	06	42	08	1.2340	1.6592
1	06	42	09	4.4676	4.9200
1	06	42	10	1.1242	1.5178
1	06	43	01	3.5753	3.8900
1	06	43	02	0.9423	1.2828
1	06	43	03	3.4514	3.7460
1	06	43	04	1.2549	1.5534
1	06	43	05	3.4189	3.7549
1	06	43	06	0.9997	1.3519
1	06	43	07	2.9744	3.3194
1	06	43	08	3.7344	4.0936
1	06	43	09	3.9760	4.3564
1	06	43	10	1.0232	1.3604
1	06	44	01	5.8734	6.0864
1	06	44	02	1.2825	1.4583
1	06	44	03	1.1414	1.3535
1	06	44	04	1.1055	1.2969
1	06	44	05	1.0872	1.2639
1	06	44	06	3.5212	3.6793
1	06	44	07	1.3830	1.5756
1	06	44	08	3.8218	4.0252
1	06	44	09	0.8927	1.1120
1	06	44	10	0.8273	1.0298
1	06	45	01	3.3095	3.4952
1	06	45	02	0.9720	1.1661
1	06	45	03	1.6198	1.7956
1	06	45	04	3.6355	3.8251
1	06	45	05	1.0852	1.2646
1	06	45	06	0.8929	1.0874
1	06	45	07	3.9660	4.2180
1	06	45	08	1.4833	1.7152
1	06	45	09	4.4066	4.5953
1	06	45	10	4.4083	4.6081

1	06	46	01	3.3507	3.5559
1	06	46	02	3.0957	3.2418
1	06	46	03	5.9452	6.0979
1	06	46	04	3.6256	3.7822
1	06	46	05	3.6388	3.7828
1	06	46	06	0.9843	1.1952
1	06	46	07	6.0180	6.1474
1	06	46	08	1.3629	1.4937
1	06	46	09	1.0344	1.1560
1	06	46	10	4.0908	4.2716
1	06	47	01	3.9251	4.3799
1	06	47	02	4.1152	4.5408
1	06	47	03	4.6065	5.0710
1	06	47	04	4.7189	5.1476
1	06	47	05	1.3798	1.8162
1	06	47	06	1.1276	1.5668
1	06	47	07	4.4516	4.9417
1	06	47	08	0.9821	1.4976
1	06	47	09	3.7698	4.1934
1	06	48	01	1.1886	1.5225
1	06	48	02	1.0130	1.3170
1	06	48	03	1.0006	1.3090
1	06	48	04	1.2342	1.5414
1	06	48	05	1.0504	1.4104
1	06	48	06	1.6057	1.9015
1	06	48	07	1.3146	1.6370
1	06	48	08	3.7907	4.1282
1	06	48	09	3.6694	3.9862
1	06	48	10	0.8282	1.1522
1	06	49	01	3.8454	4.1367
1	06	49	02	4.5323	4.8233
1	06	49	03	4.3216	4.6304
1	06	49	04	5.8619	6.1301
1	06	49	05	3.7181	3.9662
1	06	49	06	4.9010	5.2094
1	06	49	07	4.3132	4.6204
1	06	49	08	0.7740	1.0476
1	06	49	09	0.9535	1.2607
1	06	49	10	0.5190	0.8049

1	06	50	01	1.1883	1.4397
1	06	50	02	0.7519	0.9919
1	06	50	03	0.9078	1.1511
1	06	50	04	1.3835	1.6190
1	06	50	05	1.2204	1.4553
1	06	50	06	2.5666	2.8327
1	06	50	07	1.0987	1.3669
1	06	50	08	2.8820	3.1404
1	06	50	09	3.6307	3.9175
1	06	50	10	3.2646	3.5076
1	06	51	01	2.8542	3.0528
1	06	51	02	0.5584	0.8185
1	06	51	03	2.8788	3.1482
1	06	51	04	3.1556	3.3660
1	06	51	05	5.5327	5.8051
1	06	51	06	0.9442	1.1580
1	06	51	07	5.4868	5.7238
1	06	51	08	0.7080	0.9190
1	06	51	09	2.7804	3.0582
1	06	51	10	3.0154	3.2990
1	06	52	01	0.5780	0.7534
1	06	52	02	2.7491	2.8970
1	06	52	03	5.1570	5.3907
1	06	52	04	0.9910	1.1614
1	06	52	05	3.3900	3.5476
1	06	52	06	5.6834	5.9176
1	06	52	07	1.0214	1.2172
1	06	52	08	3.4042	3.6054
1	06	52	09	4.9010	5.0908
1	06	52	10	0.9578	1.1512
1	06	53	01	2.3192	2.4581
1	06	53	02	0.6760	0.8029
1	06	53	03	5.0661	5.2059
1	06	53	04	0.9435	1.0955
1	06	53	05	1.0760	1.2364
1	06	53	06	3.5166	3.6534
1	06	53	07	3.0736	3.2058
1	06	53	08	5.5588	5.7193
1	06	53	09	0.5186	0.6962
1	06	53	10	5.0186	5.1534

1	07	11	01	1.4098	2.3243	3.2009	4.1734	5.1392	6.1182
1	07	11	02	1.2947	2.1952	3.1013	4.0868	5.0452	6.0331
1	07	11	03	1.2972	2.2642	3.1894	4.1679	5.1446	6.1756
1	07	11	04	1.3112	2.3617	3.2810	4.2495	5.1336	6.1081
1	07	11	05	1.3260	2.3530	3.1980	4.1200	5.0571	5.9946
1	07	11	06	1.1473	2.2218	3.1384	4.0304	5.0461	6.0111
1	07	11	07	1.3625	2.2945	3.2234	4.1459	5.1181	6.0431
1	07	11	08	1.1384	2.0679	3.0833	4.1338	5.1541	6.0932
1	07	11	09	1.2036	2.0864	2.9848	3.9868	4.9986	5.9636
1	07	11	10	1.1943	2.1777	3.1037	4.0808	5.0431	6.0636
1	07	12	01	1.2846	2.1716	3.1066	4.0971	5.0914	6.0986
1	07	12	02	0.5807	1.4951	2.3728	3.3323	4.2659	5.1240
1	07	12	03	1.0858	1.9490	2.8875	3.8310	4.7206	5.5046
1	07	12	04	0.4872	1.3722	2.3673	3.2063	4.1737	5.1087
1	07	12	05	1.1501	2.1004	3.1101	4.0753	5.0356	5.9294
1	07	12	06	1.0463	2.0378	3.0148	4.0493	4.9912	6.0472
1	07	12	07	1.1876	2.1256	3.1148	4.1273	5.1336	6.1291
1	07	12	08	1.3463	2.3038	3.2155	4.1330	5.2045	6.1706
1	07	12	09	1.2098	2.1358	3.1599	4.1074	5.1591	6.1471
1	07	12	10	1.3575	2.2685	3.1834	4.1884	5.2407	6.1692
1	07	13	01	1.4050	2.3200	3.3190	4.2150	5.1806	6.2096
1	07	13	02	0.5094	1.4134	2.5369	3.7302	4.7600	5.5628
1	07	13	03	0.6734	1.8242	2.7520	3.6810	4.6118	5.6103
1	07	13	04	1.0621	1.9446	2.8813	3.8869	4.8870	5.8275
1	07	13	05	1.2445	2.2378	3.1550	4.1828	5.0776	6.0271
1	07	13	06	1.1962	2.3002	3.4711	4.4666	5.3112	6.2732
1	07	13	07	1.3071	2.1876	3.1520	4.2067	5.1360	6.0526
1	07	13	08	1.2624	2.2084	3.1494	4.1054	5.1186	6.0348
1	07	13	09	1.2806	2.1916	3.2905	4.2735	5.2118	6.1281
1	07	13	10	1.2738	2.1716	3.1268	4.1618	5.0901	5.9761
1	07	16	01	1.4216	2.2978	3.2328	4.1386	5.0928	6.0922
1	07	16	02	1.1426	2.2160	3.2484	4.2376	5.2290	6.1737
1	07	16	03	1.2661	2.2154	3.2540	4.3310	5.3357	6.2842
1	07	16	04	1.3152	2.2418	3.2390	4.1615	5.1446	6.1756
1	07	16	05	1.3141	2.2631	3.2345	4.2180	5.1741	6.1666
1	07	16	06	1.3228	2.3638	3.3516	4.3021	5.2977	6.2387
1	07	16	07	1.3376	2.2506	3.2635	4.2570	5.2632	6.1897
1	07	16	08	1.3842	2.2230	3.1659	4.1885	5.1957	6.1582
1	07	16	09	1.3260	2.2504	3.2475	4.2155	5.3137	6.2187
1	07	16	10	1.4217	2.4617	3.3711	4.3362	5.3697	6.2997

1	07	18	01	0.9468	1.6752	2.4170	3.2122	3.9967	4.7504
1	07	18	02	1.2049	1.9188	2.6600	3.3918	4.1194	4.8350
1	07	18	03	1.0348	1.7872	2.4840	3.2300	3.9796	4.6880
1	07	18	04	1.1411	1.8463	2.5521	3.2249	3.9623	4.6675
1	07	18	05	1.0154	1.7086	2.4558	3.2046	3.9542	4.7062
1	07	18	06	1.1608	1.8340	2.5250	3.2906	4.0154	4.7522
1	07	18	07	1.1658	1.8686	2.6094	3.4450	4.1592	4.8860
1	07	18	08	0.9884	1.7936	2.4783	3.1567	3.9712	4.6956
1	07	18	09	1.1356	1.8368	2.5522	3.2714	4.0218	4.7498
1	07	18	10	0.9794	1.6742	2.4306	3.2114	3.9886	4.7830

1	07	21	01	3.0818	3.6628	4.2508
1	07	21	02	3.2393	3.7783	4.3712
1	07	21	03	0.7017	1.2330	1.8007
1	07	21	04	3.2796	3.8361	4.4101
1	07	21	05	1.2141	1.6961	2.2743
1	07	21	06	2.7243	3.2577	3.8254
1	07	21	07	0.8577	1.3673	1.9245
1	07	21	08	3.5776	4.0941	4.6584
1	07	21	09	0.9248	1.4455	2.0210
1	07	21	10	3.8899	4.4030	4.9777

1	07	22	01	0.8833	1.2738	1.6948
1	07	22	02	3.1556	3.5306	3.9584
1	07	22	03	5.2173	5.5368	5.9538
1	07	22	04	0.8336	1.1364	1.4487
1	07	22	05	0.8885	1.2887	1.7135
1	07	22	06	5.5620	5.9210	6.3170
1	07	22	07	0.7042	1.0086	1.3686
1	07	22	08	0.6095	0.9205	1.2625
1	07	22	09	5.3550	5.7145	6.1030
1	07	22	10	0.6849	1.0524	1.4204

1	07	23	01	3.2270	3.8018	4.1450
1	07	23	02	5.3020	5.8354	6.1810
1	07	23	03	3.0171	3.5171	3.8367
1	07	23	04	0.8004	1.3314	1.6439
1	07	23	05	3.5635	4.0645	4.3595
1	07	23	06	0.6782	1.2162	1.5407
1	07	23	07	3.2372	3.7838	4.1252
1	07	23	08	2.8362	3.3452	3.6937
1	07	23	09	3.2868	3.7673	4.0863
1	07	23	10	5.3044	5.8576	6.2158

1	07	24	01	0.8753	1.1683	1.7128
1	07	24	02	0.7464	1.0149	1.5685
1	07	24	03	0.5085	0.7880	1.3345
1	07	24	04	2.5980	2.8610	3.4265
1	07	24	05	2.9893	3.2323	3.7753
1	07	24	06	5.2038	5.4798	6.0428
1	07	24	07	0.8969	1.1567	1.7027
1	07	24	08	3.4955	3.7325	4.2685
1	07	24	09	1.0499	1.2839	1.8409
1	07	24	10	3.1420	3.3775	3.9100
1	07	25	01	0.4871	0.8241	1.0881
1	07	25	02	0.9937	1.6097	2.0511
1	07	25	03	2.9543	3.3767	3.7118
1	07	25	04	0.7193	1.4443	1.9345
1	07	25	05	0.8124	1.5082	1.9317
1	07	25	06	0.7478	1.3682	1.6666
1	07	25	07	0.6923	1.3482	1.7479
1	07	25	08	2.9737	3.6226	4.0734
1	07	25	09	3.4554	3.9736	4.3974
1	07	25	10	0.3204	0.8442	1.2564
1	07	26	01	2.7957	3.0348	3.2151
1	07	26	02	3.7386	4.0638	4.3146
1	07	26	03	0.6610	0.9088	1.1041
1	07	26	04	0.7694	1.0093	1.1522
1	07	26	05	0.6492	0.8826	1.0518
1	07	27	01	5.7126	6.0458	6.3234
1	07	27	02	4.4276	4.8982	5.4200
1	07	27	03	4.6660	5.5960	5.9257
1	07	27	04	1.8844	2.5542	2.9653
1	07	27	05	2.2554	3.0534	3.4163
1	07	27	06	2.0616	2.6850	2.9576
1	07	27	07	4.4760	4.8779	5.1024
1	07	27	08	4.5132	5.2286	5.6150
1	07	27	09	3.3558	3.9678	4.3200
1	07	27	10	1.1370	1.7635	2.1653

1	07	28	01	1.3564	1.9896	2.6951
1	07	28	02	1.2592	1.7720	2.6951
1	07	28	03	4.3176	4.9044	5.2967
1	07	28	04	3.9635	4.4790	4.7581
1	07	28	05	1.1113	1.7059	2.0247
1	07	28	06	1.3303	1.7538	2.0143
1	07	28	07	1.4554	1.8678	2.2354
1	07	28	08	1.4674	2.0044	2.3362
1	07	28	09	1.1919	1.6899	2.0187
1	07	28	10	3.7088	4.1343	4.3889
1	07	31	01	0.3046	0.9850	1.6857
1	07	31	02	3.6086	4.3681	5.1535
1	07	31	03	0.9287	1.7260	2.5548
1	07	31	04	4.2482	4.9818	5.7168
1	07	31	05	0.9561	1.7023	2.4548
1	07	31	06	4.3991	5.1705	5.9139
1	07	31	07	1.2645	2.0415	2.7695
1	07	31	08	0.3489	1.0601	1.7902
1	07	31	09	4.4800	5.2745	6.0060
1	07	31	10	1.1788	2.0139	2.7111
1	07	32	01	0.2926	1.0014	2.1918
1	07	32	02	1.8892	2.7002	3.9052
1	07	32	03	1.5852	2.2916	3.2300
1	07	32	04	1.8686	2.7731	3.8387
1	07	32	05	1.4056	2.1776	3.6936
1	07	32	06	1.7340	2.4956	3.5860
1	07	32	07	1.8762	2.6511	3.7698
1	07	32	08	1.7222	2.5385	3.6014
1	07	32	09	1.3313	2.2349	3.4463
1	07	32	10	1.8247	2.7075	3.7713
1	07	33	01	0.4054	1.3494	2.0662
1	07	33	02	3.3280	4.3192	5.0520
1	07	33	03	0.4070	1.3790	2.0958
1	07	33	04	3.7280	4.8248	5.5044
1	07	33	05	1.3088	2.4016	3.1584
1	07	33	06	0.5226	1.5666	2.2914
1	07	33	07	3.7240	4.7272	5.4360
1	07	33	08	0.4892	1.5140	2.2513
1	07	33	09	3.4782	4.5446	5.2806
1	07	33	10	0.6699	1.6433	2.3462

1	07	34	01	0.5496	1.5684	2.5503
1	07	34	02	0.7042	1.6914	2.6290
1	07	34	03	0.4522	1.4802	2.7972
1	07	34	04	0.3248	1.3472	2.3669
1	07	34	05	4.2225	5.2701	6.2835
1	07	34	06	0.6795	1.6461	2.6685
1	07	34	07	0.6796	1.7227	2.8036
1	07	34	08	0.7669	1.7632	2.7001
1	07	34	09	1.0193	2.0615	3.0749
1	07	34	10	0.5516	1.6019	2.6693
1	07	35	01	0.4252	1.4468	2.4196
1	07	35	02	0.2946	1.2410	2.2050
1	07	35	03	0.2982	1.2934	2.2334
1	07	35	04	4.4942	5.4774	6.3726
1	07	35	05	1.5172	2.1666	3.4074
1	07	35	06	1.2337	2.2257	3.1089
1	07	35	07	1.4832	2.4272	3.3344
1	07	35	08	1.2668	2.2036	3.1180
1	07	35	09	1.5933	2.5517	3.4645
1	07	35	10	1.3574	2.3582	3.2774
1	07	36	01	0.4752	1.4704	2.2560
1	07	36	02	4.0062	4.9958	5.7406
1	07	36	03	0.7818	1.8426	2.6978
1	07	36	04	4.4214	5.5118	6.3742
1	07	36	05	1.1362	2.1746	3.0978
1	07	36	06	0.4120	1.4184	2.3128
1	07	36	07	3.7766	4.8206	5.7143
1	07	36	08	1.1144	2.1664	3.0448
1	07	36	09	0.3674	1.4258	2.2810
1	07	36	10	3.9267	5.0184	5.9409
1	07	41	01	1.7833	2.0920	
1	07	41	02	2.6459	2.9594	
1	07	41	03	2.7294	3.0345	
1	07	41	04	0.8293	1.1539	
1	07	41	05	2.7723	3.0696	
1	07	41	06	5.5278	5.8494	
1	07	41	07	0.8215	1.1323	
1	07	41	08	5.1207	5.4831	
1	07	41	09	4.6756	5.0299	
1	07	41	10	0.7348	1.0510	

1	07	42	01	3.5625	3.8121
1	07	42	02	4.5004	4.7782
1	07	42	03	0.7063	0.9838
1	07	42	04	2.8014	3.1086
1	07	42	05	4.6771	4.9603
1	07	42	06	1.1045	1.3901
1	07	42	07	4.6464	4.9584
1	07	42	08	3.0097	3.3355
1	07	42	09	0.7438	1.0309
1	07	42	10	4.6039	4.8982
1	07	43	01	5.6858	5.9584
1	07	43	02	0.6730	0.9492
1	07	43	03	4.4923	4.7593
1	07	43	04	4.8416	5.1476
1	07	43	05	0.6490	0.9205
1	07	43	06	3.2901	3.5559
1	07	43	07	2.5375	2.8276
1	07	43	08	0.6299	0.9500
1	07	43	09	2.6455	2.9257
1	07	43	10	2.5123	2.8105
1	07	44	01	2.4922	2.6312
1	07	44	02	3.4614	3.5908
1	07	44	03	5.0068	5.1648
1	07	44	04	2.5278	2.6628
1	07	44	05	1.3540	1.4864
1	07	44	06	0.7714	2.9282
1	07	44	07	5.5768	5.7138
1	07	44	08	1.0194	1.1774
1	07	44	09	1.0102	1.1558
1	07	44	10	0.5862	0.7254
1	07	45	01	0.4724	0.6044
1	07	45	02	5.2076	5.3426
1	07	45	03	2.8632	2.9962
1	07	45	04	0.5088	0.6240
1	07	45	05	0.4592	0.6692
1	07	45	06	0.8960	1.0484
1	07	45	07	2.7482	2.9082
1	07	45	08	2.8330	2.9704
1	07	45	09	6.0522	6.0622
1	07	45	10	2.8816	3.0108

1	07	46	01	4.4842	4.5886
1	07	46	02	0.6040	0.7148
1	07	46	03	4.2663	4.3815
1	07	46	04	1.7982	1.9242
1	07	46	05	2.4502	2.5784
1	07	46	06	3.1724	3.3014
1	07	46	07	1.0598	1.1568
1	07	46	08	4.6200	4.7292
1	07	46	09	0.6876	0.7930
1	07	46	10	5.8330	5.9444
1	07	47	01	2.9954	3.4410
1	07	47	02	0.5284	0.9752
1	07	47	03	0.7909	1.3049
1	07	47	04	2.9561	3.5109
1	07	47	05	0.8946	1.4046
1	07	47	06	0.7955	1.2404
1	07	47	07	4.1358	4.5747
1	07	47	08	3.6684	4.1528
1	07	47	09	0.6610	1.1234
1	07	47	10	3.4248	3.9344
1	07	48	01	3.3566	3.5708
1	07	48	02	0.6816	0.8886
1	07	48	03	2.5640	2.7746
1	07	48	04	2.9342	3.1310
1	07	48	05	4.0772	4.2706
1	07	48	06	2.7688	2.9816
1	07	48	07	3.2354	3.4508
1	07	48	08	0.7620	1.0104
1	07	48	09	3.6012	3.8448
1	07	48	10	1.1112	1.3232
1	07	49	01	0.8408	1.0421
1	07	49	02	2.7030	2.9271
1	07	49	03	0.3752	0.5916
1	07	49	04	0.9761	1.1969
1	07	49	05	0.4760	0.6818
1	07	49	06	0.7585	0.9871
1	07	49	07	3.1992	3.4234
1	07	49	08	2.9754	3.1920

1	07	50	01	3.4844	3.6887
1	07	50	02	5.1421	5.3665
1	07	50	03	3.2000	3.4290
1	07	50	04	2.9032	3.1051
1	07	50	05	1.0176	1.2584
1	07	50	06	0.6273	0.8388
1	07	50	07	1.5548	1.7710
1	07	50	08	1.1704	1.3616
1	07	50	09	0.9976	1.2202
1	07	51	01	1.4304	1.5680
1	07	51	02	0.7128	0.8718
1	07	51	03	0.4438	0.6032
1	07	51	04	4.3056	4.4850
1	07	51	05	4.1026	4.2574
1	07	51	06	0.5474	0.7072
1	07	51	07	4.0784	4.2376
1	07	51	08	2.2334	2.3932
1	07	51	09	0.5369	0.6927
1	07	51	10	2.1536	2.3012
1	07	52	01	2.6206	2.7362
1	07	52	02	3.9407	4.0105
1	07	52	03	0.5254	0.6066
1	07	52	04	2.2414	2.3396
1	07	52	05	4.2254	4.3362
1	07	52	06	0.5704	0.6724
1	07	52	07	4.0424	4.1216
1	07	52	08	2.1678	2.2556
1	07	52	09	0.4709	0.5825
1	07	52	10	3.6908	3.7920
1	07	53	01	4.9150	5.0060
1	07	53	02	4.3688	4.4488
1	07	53	03	2.3676	2.4972
1	07	53	04	2.4264	2.5320
1	07	53	05	2.2996	2.4110
1	07	53	06	0.6632	0.7370
1	07	53	07	3.9480	4.0570
1	07	53	08	3.7492	3.8664
1	07	53	09	0.4728	0.5658

1	08	11	01	0.6406	1.5560	2.4954	3.4056	4.3880	5.3968
1	08	11	02	0.3664	1.3855	2.3788	3.3206	4.3300	5.3064
1	08	11	03	0.7412	1.6320	2.5756	3.5720	4.7116	5.7460
1	08	11	04	1.0226	2.0260	3.0284	3.9448	4.9501	6.0226
1	08	11	05	0.8139	1.7376	2.6776	3.5862	4.5390	5.5217
1	08	11	06	0.8200	1.7226	2.6988	3.6888	4.7457	5.8116
1	08	11	07	0.9293	1.8848	2.9104	3.9191	4.9809	5.9811
1	08	11	08	0.6856	1.6478	2.6762	3.7216	4.9177	6.0658
1	08	11	09	0.7202	1.7410	2.7139	3.6714	4.6644	5.5170
1	08	12	01	1.0030	2.0408	3.5072	4.2113	5.1230	6.0328
1	08	12	02	1.2984	2.1052	3.1058	4.0152	5.1426	6.0644
1	08	13	01	0.5502	1.4610	2.4655	3.3364	4.3658	5.2876
1	08	13	02	0.5159	1.2388	2.3488	3.0888	4.1772	5.0166
1	08	13	03	0.5028	1.2218	2.1448	2.9754	4.0838	4.9056
1	08	13	04	0.4205	1.2860	2.4080	3.4470	4.3327	5.2576
1	08	13	05	1.6194	2.3838	3.3862	4.1140	5.2059	5.9310
1	08	16	01	0.7496	1.6144	2.5266	3.4188	4.3945	5.3652
1	08	16	02	0.6666	1.7175	2.6762	3.5948	4.5153	5.4628
1	08	16	03	0.9988	1.9488	2.9225	3.8468	4.8630	5.8315
1	08	16	04	0.8772	1.8044	2.7871	3.6860	4.6565	5.6018
1	08	16	05	0.7866	1.6984	2.7288	3.6806	4.7638	5.7114
1	08	16	06	0.7437	1.6392	2.6129	3.5479	4.5925	5.5798
1	08	16	07	0.7649	1.7182	2.7467	3.7207	4.6462	5.6430
1	08	16	08	0.6705	1.5335	2.4106	3.3148	4.2725	5.2997
1	08	16	09	0.8447	1.6714	2.6876	3.6498	4.6821	5.6979
1	08	16	10	0.6152	1.4708	2.3123	3.2870	4.2799	5.2365
1	08	18	01	1.3521	2.1095	2.8434	3.5336	4.2522	5.0056
1	08	18	02	1.0843	1.8599	2.6040	3.3154	4.1232	4.8750
1	08	18	03	0.7279	1.5721	2.3330	3.0349	3.8185	4.5712
1	08	18	04	1.0226	1.7336	2.5094	3.2468	4.0160	4.7826
1	08	18	05	0.8866	1.6051	2.3677	3.1046	3.8454	4.5655
1	08	18	06	0.6602	1.3650	2.1247	2.8654	3.5811	4.2922
1	08	18	07	1.0503	1.8666	2.5838	3.3406	4.0628	4.8224
1	08	18	08	1.2882	2.0446	2.7716	3.5365	4.2884	4.9468
1	08	18	09	1.1784	1.9145	2.6813	3.4568	4.2240	5.0194
1	08	18	10	1.2684	1.9772	2.7075	3.4689	4.1507	4.8858

1	08	21	01	4.8686	5.0986	5.4074
1	08	21	02	0.3588	0.6688	0.9233
1	08	21	03	0.6405	0.9605	1.2940
1	08	21	04	3.0531	3.4416	3.7836
1	08	21	05	5.6045	5.8790	6.1885
1	08	22	01	2.7556	3.0216	3.2864
1	08	22	02	4.7110	5.0014	5.2710
1	08	22	03	0.4728	0.7352	1.0060
1	08	22	04	2.5880	2.9215	3.2540
1	08	22	05	5.2944	5.6424	6.0003
1	08	23	01	0.6161	0.8730	1.1254
1	08	23	02	5.2540	5.5168	5.7916
1	08	23	03	2.6602	2.8634	3.3030
1	08	23	04	0.7042	1.1290	1.5802
1	08	24	01	0.7915	1.1035	1.3691
1	08	24	02	3.1405	3.4300	3.7205
1	08	24	03	0.8826	1.1254	1.5143
1	08	24	04	3.1778	3.4394	3.7142
1	08	24	05	4.8272	5.0842	5.4677
1	08	25	01	0.8835	1.2125	1.4740
1	08	25	02	1.0543	2.6180	3.6296
1	08	25	03	1.8382	2.6718	3.2310
1	08	25	04	0.5770	0.9725	1.2905
1	08	25	05	2.0865	2.6865	3.0561
1	08	25	06	0.8332	2.0082	2.7654
1	08	25	07	2.0006	2.8754	3.2291
1	08	25	08	1.9688	2.2912	2.5300
1	08	25	09	2.2582	2.5674	2.8118

1	08	26	01	3.0716	3.3112	3.5196
1	08	26	02	0.6714	1.2104	1.7000
1	08	26	03	2.0494	2.5186	2.9908
1	08	26	04	1.9368	2.3862	3.1009
1	08	26	05	2.3439	2.7609	3.0843
1	08	26	06	1.9630	2.4583	2.8213
1	08	26	07	1.5656	2.4080	2.9832
1	08	26	08	0.5717	0.9102	1.1997
1	08	26	09	0.9860	1.4060	1.7755
1	08	26	10	2.5977	3.4626	4.0707
1	08	27	01	1.5868	1.9726	2.2444
1	08	27	02	3.8906	4.2576	4.5376
1	08	27	03	1.1758	2.0592	3.1508
1	08	27	04	1.0484	1.9185	2.2216
1	08	27	05	1.8265	2.3040	2.5905
1	08	27	06	1.8100	2.6560	3.5364
1	08	27	07	1.1162	1.6266	2.0186
1	08	27	08	2.0080	2.7304	3.1848
1	08	27	09	2.0009	2.4365	2.8259
1	08	27	10	1.4948	2.3516	2.8084
1	08	28	01	1.4800	2.7940	3.3264
1	08	28	02	0.8004	1.2468	1.9252
1	08	28	03	0.8101	1.3033	2.1286
1	08	28	04	2.3688	3.1094	3.3691
1	08	28	05	2.0780	2.5180	2.8245
1	08	28	06	1.7034	2.7735	3.2640
1	08	28	07	2.9332	3.6052	4.1698
1	08	28	08	0.9948	1.4244	1.7895
1	08	28	09	2.1416	2.7443	3.1853
1	08	28	10	2.0257	2.9157	3.3737
1	08	31	01	0.6592	1.1505	1.6689
1	08	31	02	2.9568	3.4578	4.0932
1	08	31	03	0.6846	1.5085	2.1315
1	08	31	04	0.5982	1.7572	2.6236
1	08	31	05	5.0444	5.6420	6.3782
1	08	31	06	4.5161	5.3484	5.9504
1	08	31	07	0.6366	1.1826	1.7742
1	08	31	08	3.1698	3.8100	4.3812

1	08	32	01	0.9393	1.6005	2.4061
1	08	32	02	1.4811	2.0732	2.9104
1	08	32	03	1.0984	1.8224	2.7392
1	08	32	04	0.2420	0.9392	1.8625
1	08	32	05	3.1601	3.7363	4.5043
1	08	32	06	0.5685	1.1901	1.9684
1	08	32	07	3.2362	3.7352	4.5610
1	08	32	08	0.5226	0.9378	1.7310
1	08	33	01	0.8852	2.0540	2.6132
1	08	33	02	0.7576	1.6763	2.1117
1	08	33	03	0.8529	1.7762	2.3055
1	08	33	04	0.6451	1.5419	1.9999
1	08	33	05	1.1592	2.0316	2.5488
1	08	33	06	0.7080	1.5756	2.0538
1	08	41	01	0.8729	1.1981	
1	08	41	02	5.0375	5.3573	
1	08	41	03	0.4529	0.8132	
1	08	41	04	4.7728	5.0908	
1	08	41	05	4.5807	4.8819	
1	08	41	06	5.5868	5.9046	
1	08	41	07	2.3188	2.6482	
1	08	41	08	2.7111	3.0686	
1	08	41	09	5.0632	5.3712	
1	08	41	10	0.6250	0.9646	
1	08	42	01	2.8723	3.2053	
1	08	42	02	4.9356	5.2389	
1	08	42	03	2.7488	3.0422	
1	08	42	04	0.4993	0.8284	
1	08	42	05	0.2855	0.5852	
1	08	42	06	3.4585	3.7573	
1	08	42	07	0.3220	0.6380	
1	08	42	08	0.5749	0.9226	
1	08	42	09	2.8711	3.1604	
1	08	42	10	0.2670	0.6034	

1	08	43	01	2.6757	2.9472
1	08	43	02	2.8200	3.0810
1	08	43	03	5.1204	5.3964
1	08	43	04	2.6417	2.9486
1	08	43	05	2.2972	2.5804
1	08	43	06	1.1573	1.4394
1	08	43	07	4.3200	4.6153
1	08	43	08	0.3239	0.5693
1	08	43	09	4.1599	4.4689
1	08	44	01	2.7314	2.8926
1	08	44	02	0.7626	0.9417
1	08	44	03	5.0420	5.1852
1	08	44	04	0.4422	0.6471
1	08	44	05	4.6365	4.8093
1	08	44	06	0.6588	0.8318
1	08	44	07	4.9704	5.1052
1	08	44	08	5.4570	5.6460
1	08	44	09	0.7180	0.8834
1	08	44	10	0.5676	0.7190
1	08	45	01	4.5779	4.7453
1	08	45	02	2.7124	2.8982
1	08	45	03	2.9810	3.1134
1	08	45	04	2.4878	2.6774
1	08	45	05	0.5116	0.6875
1	08	45	06	4.8090	4.9575
1	08	45	07	0.5990	0.7514
1	08	45	08	3.2666	3.4120
1	08	45	09	4.7076	4.8510
1	08	45	10	4.6664	4.8357
1	08	46	01	4.9920	5.1544
1	08	46	02	4.9512	5.1060
1	08	46	03	0.4665	0.5987
1	08	46	04	2.6603	2.8193
1	08	46	05	2.5214	2.6460
1	08	46	06	2.4644	2.6036
1	08	46	07	2.6640	2.7872
1	08	46	08	0.7712	0.9090
1	08	46	09	2.5868	2.7294
1	08	46	10	2.5376	2.6548

1	08	48	01	4.0452	4.3425
1	08	48	02	0.4931	0.7934
1	08	48	03	2.0372	2.3040
1	08	48	04	4.5558	4.8378
1	08	48	05	0.5255	0.8333
1	08	49	01	3.0140	3.3196
1	08	49	02	3.2348	3.5294
1	08	51	01	1.4711	1.6469
1	08	51	02	4.4874	4.7260
1	08	51	03	0.7454	0.9194
1	08	51	04	5.6854	5.8824
1	08	51	05	5.1580	5.3394
1	08	51	06	5.3798	5.5856
1	08	51	07	0.4584	0.6562
1	08	52	01	3.3537	3.5397
1	08	52	02	0.2832	0.4893
1	08	52	03	3.5978	3.7684
1	08	52	04	0.6444	0.9021
1	08	52	05	2.5176	2.7045
1	08	52	06	3.1546	3.4045
1	08	52	07	2.3374	2.5104
1	08	52	08	4.2991	4.4783
1	08	52	09	2.8045	2.9557
1	08	52	10	4.4462	4.6006
1	08	53	01	5.2594	5.4338
1	08	53	02	2.4592	2.6702
1	08	53	03	2.9516	3.1679
1	08	53	04	1.3436	1.4999
1	08	53	05	2.9962	3.1892
1	08	53	06	4.6062	4.7990
1	08	53	07	2.4291	2.5896
1	08	53	08	4.4688	4.6076
1	08	53	09	2.5254	2.7306
1	08	53	10	4.8233	4.9991

1	09	11	01	0.4464	1.4057	2.4164	3.4579	4.5176	5.5816
1	09	11	02	0.4860	1.4794	2.4944	3.4840	4.5618	5.5896
1	09	11	03	0.8916	1.8676	2.9056	3.9584	5.0082	6.0602
1	09	11	04	0.5951	1.4616	2.4766	3.5485	4.7024	5.7558
1	09	11	05	0.8006	1.8002	2.8318	3.8264	4.8855	5.9444
1	09	11	06	0.5831	1.5388	2.5078	3.5441	4.5870	5.7393
1	09	11	07	0.6565	1.6720	2.7186	3.6588	4.7086	5.7518
1	09	11	08	0.6518	1.5688	2.5978	3.7284	4.8772	5.9006
1	09	11	09	0.6673	1.5466	2.5510	3.6378	4.7222	5.7904
1	09	11	10	0.6410	1.7216	2.8379	3.8206	4.8126	5.7894
1	09	12	01	0.6910	1.6521	2.5912	3.6072	4.6829	5.7787
1	09	12	02	0.3874	1.3610	2.3566	3.4108	4.4919	5.5194
1	09	12	03	0.3826	1.3189	2.3869	3.3369	4.4976	5.4587
1	09	12	04	1.2240	2.1894	3.1268	4.2296	5.3134	6.3104
1	09	12	05	0.7293	1.6300	2.6370	3.5733	4.6624	5.6649
1	09	12	06	0.6082	1.5750	2.5936	3.5322	4.7307	5.8363
1	09	12	07	0.6714	1.6146	2.6564	3.6060	4.6890	5.6791
1	09	12	08	0.4474	1.4811	2.5412	3.4808	4.6468	5.6698
1	09	12	09	0.5843	1.6082	2.6364	3.5502	4.5424	5.6210
1	09	12	10	0.4890	1.5130	2.5602	3.5462	4.6766	5.6077
1	09	13	01	0.5489	1.7130	2.8316	3.7455	4.8295	5.7602
1	09	13	02	1.0374	1.8806	2.9252	3.8913	5.1739	6.1090
1	09	13	03	0.5785	1.5603	2.5584	3.6024	4.6347	5.6695
1	09	13	04	0.5200	1.6487	2.6576	3.6850	4.7246	5.7643
1	09	13	05	0.5164	1.5626	2.6578	3.6691	4.6902	5.7846
1	09	13	06	0.5822	1.6054	2.6057	3.6372	4.7724	5.7776
1	09	13	07	0.5894	1.5532	2.6354	3.5961	4.7240	5.7971
1	09	13	08	0.5618	1.5519	2.5738	3.5723	4.6828	5.7027
1	09	13	09	0.5988	1.5642	2.5909	3.5868	4.6610	5.7237
1	09	13	10	0.5665	1.5414	2.6202	3.5374	4.7466	5.6577
1	09	16	01	0.4210	1.4232	2.5439	3.6226	4.6530	5.7480
1	09	16	02	0.6382	1.6436	2.6784	3.7374	4.7972	5.8268
1	09	16	03	0.5756	1.6147	2.7383	3.7500	4.7898	5.8848
1	09	16	04	0.4462	1.5150	2.5579	3.6353	4.6299	5.5310
1	09	16	05	0.5419	1.4571	2.3698	3.6200	4.6873	5.7793
1	09	16	06	0.4993	1.5161	2.5757	3.5959	4.6239	5.6655
1	09	16	07	0.8798	1.9130	2.9808	4.0734	5.0359	6.0202
1	09	16	08	0.6117	1.6188	2.6574	3.7355	4.7782	5.8647
1	09	16	09	0.4748	1.3778	2.3594	3.4174	4.5531	5.5375
1	09	16	10	0.5136	1.5402	2.5009	3.5412	4.5704	5.6416

1	09	18	01	0.6805	1.3840	2.1679	2.9166	3.6906	4.4508
1	09	18	02	1.1528	1.8953	2.5814	3.2986	4.1384	4.8585
1	09	18	03	0.6449	1.4182	2.1548	2.8433	3.6668	4.4216
1	09	18	04	0.5631	1.3250	2.0591	2.7568	3.5783	4.2816
1	09	18	05	1.4132	2.1529	2.8383	3.5830	4.3571	5.0789
1	09	18	06	0.7544	1.4417	2.0756	2.7650	3.6012	4.3834
1	09	18	07	1.1794	1.9549	2.7044	3.4390	4.1636	4.9509
1	09	18	08	1.1924	1.9386	2.7282	3.4161	4.1458	4.9171
1	09	18	09	1.1914	1.9454	2.6530	3.8070	4.1211	4.9677
1	09	18	10	1.2026	1.9898	2.7249	3.4561	4.2674	4.9400

1	09	21	01	1.0780	1.5590	2.0722
1	09	21	02	0.9471	1.3914	1.8570
1	09	21	03	3.0082	3.5026	3.9652
1	09	21	04	2.9444	3.3866	3.8210
1	09	21	05	2.9019	3.3657	3.8145
1	09	21	06	2.7420	3.1956	3.6780
1	09	21	07	0.4938	0.9234	1.3836
1	09	21	08	1.1826	1.6458	2.1414
1	09	21	09	2.7578	3.2204	3.7208
1	09	21	10	0.9390	1.3842	1.8798

1	09	22	01	3.7142	4.0427	4.3927
1	09	22	02	1.0252	1.3302	1.6602
1	09	22	03	0.7379	1.0639	1.3809
1	09	22	04	0.6654	1.0258	1.3968
1	09	22	05	3.0331	3.3686	3.7411
1	09	22	06	3.5209	3.8259	4.1824
1	09	22	07	0.5676	0.8801	1.2181
1	09	22	08	2.8282	3.1912	3.5337
1	09	22	09	3.7541	4.0996	4.4571
1	09	22	10	3.4626	3.8106	4.1776

1	09	23	01	2.7736	3.2656	3.6268
1	09	23	02	3.1411	3.6385	3.9772
1	09	23	03	0.6340	1.1914	1.5952
1	09	23	04	0.5691	1.0953	1.4619
1	09	23	05	1.0045	1.4755	1.8170
1	09	23	06	1.1302	1.5977	1.9177
1	09	23	07	0.5455	0.9800	1.3045
1	09	23	08	2.9889	3.4699	3.7934
1	09	23	09	2.5877	3.0833	3.4433
1	09	23	10	0.7762	1.2628	1.6414

1	09	24	01	0.6408	0.8800	1.3213
1	09	24	02	5.1192	5.4282	5.9052
1	09	24	03	2.4666	2.7479	3.2213
1	09	24	04	3.3627	3.6722	4.1337
1	09	24	05	3.4817	3.7522	4.2359
1	09	24	06	2.6460	2.9425	3.4285
1	09	24	07	0.9385	1.2770	1.7600
1	09	25	01	1.1072	1.3858	1.6028
1	09	25	02	0.9016	1.2620	1.5000
1	09	25	03	3.3588	3.6228	3.8732
1	09	25	04	0.5531	1.0246	1.3246
1	09	25	05	4.8414	5.2202	5.4526
1	09	25	06	2.7816	3.1396	3.3580
1	09	25	07	0.4147	0.7099	0.9661
1	09	25	08	1.0474	1.3446	1.6086
1	09	25	09	1.0526	1.5321	1.7311
1	09	25	10	0.7024	1.0388	1.2688
1	09	26	01	1.7724	2.0536	2.2878
1	09	26	02	3.6376	3.8820	4.0716
1	09	26	03	0.9982	1.2316	1.4245
1	09	26	04	0.8862	1.1395	1.3148
1	09	26	05	4.2573	4.5174	4.6860
1	09	26	06	0.7300	1.0140	1.1940
1	09	26	07	1.8441	2.0966	2.2966
1	09	26	08	1.1869	1.4186	1.5640
1	09	26	09	3.0549	3.2600	3.4320
1	09	27	01	0.7950	1.2500	1.4710
1	09	27	02	1.0198	1.6777	1.9567
1	09	27	03	5.2438	6.0306	6.3148
1	09	27	04	0.8834	1.7430	2.0454
1	09	27	05	1.0890	1.6686	1.9662
1	09	27	06	0.5451	1.0197	1.2819
1	09	27	07	3.3199	4.0927	4.4224
1	09	27	08	0.8062	1.4830	1.8160
1	09	27	09	4.2867	5.0420	5.3549
1	09	27	10	0.7763	1.4371	1.7248

1	09	28	01	3.1585	3.6212	4.1896
1	09	28	02	4.6444	5.2698	6.0565
1	09	28	03	0.9182	1.6082	2.6482
1	09	28	04	1.6982	2.3342	2.9758
1	09	28	05	1.0451	1.6163	2.3931
1	09	28	06	1.5946	2.3176	3.2416
1	09	28	07	4.3818	4.9882	5.6754
1	09	28	08	0.7787	1.3139	2.0467
1	09	28	09	0.7048	1.2504	2.0600
1	09	31	01	0.9639	1.7394	2.5414
1	09	31	02	0.3590	1.1088	2.0494
1	09	31	03	0.6473	1.2805	2.2038
1	09	31	04	3.8059	4.5136	5.4019
1	09	31	05	0.6030	1.3248	2.0280
1	09	31	06	0.4500	1.2837	1.9949
1	09	31	07	3.7342	4.5056	5.1650
1	09	31	08	0.7948	1.6096	2.2858
1	09	32	01	0.6373	1.3402	2.7298
1	09	32	02	0.8422	1.6382	2.6358
1	09	32	03	0.8696	1.5178	2.4719
1	09	32	04	0.8316	1.6660	2.6524
1	09	32	05	0.6386	1.3624	2.2528
1	09	32	06	0.5627	1.3026	2.2329
1	09	32	07	0.5995	1.3443	2.1885
1	09	32	08	0.9020	1.7004	2.7124
1	09	32	09	0.7897	1.6633	2.6457
1	09	32	10	0.7628	1.5204	2.5188
1	09	33	01	2.3026	3.3693	4.2358
1	09	33	02	0.2896	1.3356	2.1153
1	09	33	03	0.5514	1.6658	2.3598
1	09	33	04	0.9718	1.9894	2.5659
1	09	33	05	0.6136	1.8728	2.4482
1	09	33	06	0.7931	1.6100	2.1887
1	09	33	07	0.8515	1.9225	2.4026

1	09	34	01	3.8406	4.7982	5.8067
1	09	34	02	0.5045	1.4900	2.5547
1	09	34	03	0.5547	1.4961	2.5851
1	09	34	04	0.7100	1.5684	2.4628
1	09	34	05	0.7389	1.7496	2.7837
1	09	34	06	0.9878	1.8822	2.8390
1	09	34	07	0.8394	1.7732	2.7492
1	09	34	08	0.9043	1.8179	2.7419
1	09	34	09	0.8562	1.7762	2.6634
1	09	35	01	0.8488	1.8032	2.7088
1	09	35	02	0.4830	1.4862	2.4414
1	09	35	03	0.6604	1.5724	2.4916
1	09	35	04	0.8960	1.8280	2.7320
1	09	35	05	0.7200	1.6912	2.6368
1	09	35	06	0.5409	1.5606	2.5218
1	09	35	07	1.0675	2.0123	2.9123
1	09	35	08	0.4668	1.3972	2.2924
1	09	35	09	0.5818	1.5018	2.3778
1	09	36	01	0.7848	1.7684	2.6388
1	09	36	02	0.5130	1.4850	2.3715
1	09	36	03	0.4165	1.3972	2.3069
1	09	36	04	0.8712	1.9022	2.8182
1	09	36	05	0.7778	1.7498	2.6610
1	09	36	06	0.6496	1.5724	2.4200
1	09	36	07	0.5498	1.5950	2.4550
1	09	36	08	0.6464	1.6584	2.5344
1	09	36	09	0.5340	1.4650	2.2301
1	09	36	10	3.7432	4.6520	5.4936
1	09	41	01	5.8816	6.2363	
1	09	41	02	0.8782	1.1636	
1	09	41	03	3.0133	3.3124	
1	09	41	04	0.8194	1.1602	
1	09	41	05	1.0621	1.3243	
1	09	41	06	2.6798	2.9957	
1	09	41	07	4.4894	4.8083	
1	09	41	08	0.7144	1.0345	
1	09	41	09	1.0088	1.3044	
1	09	41	10	1.0646	1.3964	

1	09	42	01	3.4744	3.7927
1	09	42	02	3.5826	3.8722
1	09	42	03	3.1806	3.4648
1	09	42	04	6.0759	6.3846
1	09	42	05	0.2969	0.5708
1	09	42	06	5.0411	5.3240
1	09	42	07	2.7524	3.0442
1	09	42	08	5.2297	5.5444
1	09	42	09	3.5206	3.8190
1	09	42	10	5.9559	6.2709

1	09	43	01	0.9677	1.2923
1	09	43	02	0.5970	0.9006
1	09	43	03	3.0904	3.3376
1	09	43	04	5.4857	5.7460
1	09	43	05	0.8741	1.1417
1	09	43	06	3.0558	3.3136
1	09	43	07	5.3796	5.6288
1	09	43	08	1.5900	1.8602
1	09	43	09	4.1877	4.4508
1	09	43	10	0.9832	1.2154

1	09	44	01	1.3874	1.4950
1	09	44	02	1.2806	1.4348
1	09	44	03	3.5315	3.6435
1	09	44	04	5.7810	5.8852
1	09	44	05	3.2720	3.4121
1	09	44	06	5.5103	5.6336
1	09	44	07	1.0064	1.1351
1	09	44	08	3.1019	3.2510
1	09	44	09	5.3769	5.4814
1	09	44	10	1.1104	1.2235

1	09	45	01	2.8468	2.9990
1	09	45	02	3.6324	3.7754
1	09	45	03	2.0847	2.2045
1	09	45	04	4.7030	4.8424
1	09	45	05	0.8307	0.9751
1	09	45	06	0.8552	0.9956
1	09	45	07	3.1516	3.2557
1	09	45	08	5.3004	5.4322
1	09	45	09	1.0504	1.1760
1	09	45	10	3.0186	3.1776

1	09	46	01	5.7884	5.9130
1	09	46	02	0.6452	0.7417
1	09	46	03	3.0686	3.1870
1	09	46	04	3.1948	3.3072
1	09	46	05	0.6958	0.8064
1	09	46	06	3.5261	3.6091
1	09	46	07	5.5492	5.6608
1	09	46	08	0.9344	1.0406
1	09	46	09	3.0697	3.1504
1	09	46	10	5.2998	5.4239

1	09	47	01	0.9340	1.2724
1	09	47	02	1.0746	1.4945
1	09	47	03	4.7095	5.0977
1	09	47	04	3.9623	4.4117
1	09	47	05	0.5331	0.9729
1	09	47	06	0.4681	0.8663
1	09	47	07	5.6318	6.0129
1	09	47	08	5.5480	5.9581
1	09	47	09	1.3138	1.6612
1	09	47	10	0.9012	1.2870

1	09	48	01	0.8777	1.1003
1	09	48	02	0.6990	0.9424
1	09	48	03	4.2658	4.5002
1	09	48	04	4.2873	4.4877
1	09	48	05	1.3913	1.6264
1	09	48	06	0.8155	1.0822
1	09	48	07	3.8153	4.1070
1	09	48	08	3.9452	4.2058
1	09	48	09	0.7569	0.9972
1	09	48	10	0.8277	1.0842

1	09	49	01	3.8420	4.1129
1	09	49	02	4.6655	4.8905
1	09	49	03	1.3453	1.5527
1	09	49	04	0.5105	0.7528
1	09	49	05	4.1909	4.3889
1	09	49	06	4.3680	4.6088
1	09	49	07	1.2316	1.4345
1	09	49	08	1.2469	1.4668
1	09	49	09	4.8152	5.0613
1	09	49	10	1.4458	1.6421

1	09	50	01	3.4429	3.7063
1	09	50	02	3.6602	3.8117
1	09	50	03	1.4043	1.6265
1	09	50	04	0.9341	1.1379
1	09	50	05	3.9533	4.1616
1	09	50	06	2.9640	3.1843
1	09	50	07	1.7560	1.9664
1	09	50	08	4.1320	4.3585
1	09	50	09	3.9994	4.2250
1	09	50	10	4.4773	4.7149

1	09	51	01	0.8270	0.9290
1	09	51	02	0.6825	0.8316
1	09	51	03	0.8126	0.9998
1	09	51	04	3.0870	3.2601
1	09	51	05	0.6229	0.8259
1	09	51	06	2.6293	2.8051
1	09	51	07	4.8930	5.0655
1	09	51	08	0.7228	0.8928
1	09	51	09	0.7226	0.8450

1	09	52	01	3.2176	3.3202
1	09	52	02	2.9698	3.1046
1	09	52	03	0.7944	0.9085
1	09	52	04	2.9444	3.0436
1	09	52	05	0.6866	0.8232
1	09	52	06	5.0471	5.1520
1	09	52	07	2.9514	3.0570
1	09	52	08	0.6524	0.7235
1	09	52	09	5.5249	5.6032
1	09	52	10	2.6283	2.7081

1	09	53	01	5.9355	6.0699
1	09	53	02	0.8210	0.9476
1	09	53	03	5.2184	5.3388
1	09	53	04	0.7366	0.7989
1	09	53	05	3.2860	3.3828
1	09	53	06	5.3814	5.4706
1	09	53	07	0.6390	0.7110
1	09	53	08	3.2434	3.2770
1	09	53	09	2.8557	2.9328
1	09	53	10	4.7554	4.8556

1	10	11	01	0.5704	1.5786	2.4736	3.4240	4.3268	5.2568
1	10	11	02	0.3754	1.3823	2.4068	3.2822	4.2572	5.2166
1	10	11	03	0.6522	1.7786	2.7360	3.6236	4.5264	5.4564
1	10	11	04	0.6979	1.6516	2.5470	3.5700	4.5854	5.6768
1	10	11	05	0.5012	1.6620	2.7710	3.9000	5.0006	5.9882
1	10	11	06	0.3764	1.5838	2.7138	3.9442	5.0472	6.0588
1	10	11	07	0.3904	1.3374	2.3497	3.3166	4.3928	5.3494
1	10	11	08	0.4925	1.6676	2.7692	3.7338	4.7029	5.6618
1	10	11	09	0.4302	1.4022	2.3032	3.2858	4.2220	5.2226

1	10	12	01	0.4562	1.5654	2.7516	3.7544	4.8952	5.8430
1	10	12	02	1.0008	1.9770	3.1664	4.1950	5.2102	6.2070
1	10	12	03	0.3340	1.3276	2.4006	3.5086	4.5159	5.5710
1	10	12	04	0.9858	2.0423	3.0300	4.1314	5.1517	6.2066
1	10	12	05	0.5786	1.6524	2.7240	3.6502	4.8134	5.8396
1	10	12	06	0.3992	1.4555	2.4194	3.3514	4.3696	5.3652
1	10	12	07	0.9376	1.9448	2.9162	4.0104	5.1270	6.1912
1	10	12	08	0.6630	1.9726	2.9950	4.0116	5.0196	5.9552
1	10	12	09	0.4046	1.1274	2.1528	3.1850	4.2858	5.2860
1	10	12	10	0.3324	1.2988	2.3072	3.3524	4.4146	6.1632

1	10	13	01	0.3936	1.2812	2.3505	3.1690	4.3659	5.1996
1	10	13	02	0.4536	1.5180	2.5768	3.4610	4.4298	5.2698
1	10	13	03	0.4398	1.4448	2.4128	3.2612	4.3778	5.2946
1	10	13	04	0.5084	2.3526	3.2756	4.0564	5.4558	6.2694
1	10	13	05	0.4676	1.5130	2.3886	3.3370	4.3724	5.3284
1	10	13	06	1.0068	1.9160	3.0050	4.1462	5.1032	6.0312
1	10	13	07	0.3926	1.5464	2.7570	3.9412	5.2108	6.3673
1	10	13	08	0.4996	1.4241	2.5185	3.5006	4.4488	5.4143
1	10	13	09	0.3976	1.2518	2.2324	3.0688	4.0170	4.9574
1	10	13	10	0.3810	1.2700	2.3758	3.4506	4.5208	5.3900

1	10	16	01	0.6516	1.6320	2.7738	3.6247	4.5736	5.4992
1	10	16	02	0.7192	1.6508	2.5663	3.5150	4.5057	5.5304
1	10	16	03	0.4505	1.2804	2.1974	3.1697	4.2894	5.3046
1	10	16	04	0.9694	1.7752	2.7042	4.6454	5.3392	6.2909
1	10	16	05	0.6550	1.3714	2.2494	3.1348	4.1798	5.0804
1	10	16	06	0.6006	1.5300	2.4422	3.3256	4.3497	5.3102
1	10	16	07	0.3302	1.2550	2.3352	3.3838	4.5200	5.5604
1	10	16	08	0.4766	1.4924	2.4404	3.4024	4.4422	5.4664
1	10	16	09	0.5406	1.3830	2.3068	3.2088	4.1960	5.1520
1	10	16	10	0.5086	1.5606	2.5916	3.5894	4.5520	5.7402

1	10	18	01	0.7758	1.4923	2.0996	2.7935	3.4367	4.0958
1	10	18	02	1.1084	1.6552	2.2071	2.8522	3.4573	4.1393
1	10	18	03	1.1568	1.8756	2.5792	3.2750	4.0372	4.7798
1	10	18	04	0.9354	1.7434	2.5108	3.3074	4.1282	4.7952
1	10	18	05	1.1298	1.9966	2.8354	3.6456	4.2944	5.0007
1	10	18	06	0.7381	1.4449	2.2080	2.8541	3.5702	4.3678
1	10	18	07	1.0904	1.9546	2.5764	3.2871	3.9704	4.7406
1	10	18	08	1.2818	2.0498	2.7836	3.5567	4.2745	5.0409
1	10	18	09	1.1907	1.9650	2.7652	3.6262	4.3304	5.0454

1	10	21	01	1.1692	1.6718	2.2115
1	10	21	02	3.5159	4.1162	4.7586
1	10	21	03	0.6692	1.3044	1.9318
1	10	21	04	0.4993	1.0768	1.6613
1	10	21	05	0.3210	0.8033	1.3367
1	10	21	06	0.5506	1.1620	1.7108
1	10	21	07	0.7637	1.2894	1.8164
1	10	21	08	3.2754	3.7716	4.2762
1	10	21	09	0.6949	1.2468	1.7662
1	10	21	10	3.3780	3.8870	4.4286

1	10	22	01	3.7039	3.8848	4.0873
1	10	22	02	0.5339	0.8106	1.0755
1	10	22	03	3.5576	3.8160	4.0828
1	10	22	04	3.5050	3.7358	4.0010
1	10	22	05	0.8184	1.0865	1.3825
1	10	22	06	0.2652	0.5444	0.8056
1	10	22	07	2.2224	2.5300	2.8266
1	10	22	08	3.3748	3.6636	3.9296
1	10	22	09	3.2444	3.4912	3.7786
1	10	22	10	0.4415	0.6835	0.9367

1	10	23	01	3.4852	3.9612	4.2137
1	10	23	02	3.1234	3.5592	3.8443
1	10	23	03	2.7498	3.2628	3.5627
1	10	23	04	0.4526	0.9525	1.2207
1	10	23	05	2.5435	3.0665	3.3106
1	10	23	06	0.7943	1.3898	1.5766
1	10	23	07	4.3878	4.9428	5.2228
1	10	23	08	3.3948	3.9972	4.2663
1	10	23	09	0.5643	1.0783	1.3443
1	10	23	10	2.2748	2.7928	2.9928

1	10	24	01	1.2138	1.5413	2.0093
1	10	24	02	1.5047	1.7930	2.3252
1	10	24	03	4.0240	4.3384	4.9867
1	10	24	04	1.0898	1.4412	2.0384
1	10	24	05	1.0960	1.4540	2.0413
1	10	24	06	0.8884	1.1620	1.8046
1	10	24	07	0.7544	0.9861	1.5214
1	10	24	08	3.0703	3.3441	3.9075
1	10	24	09	0.8674	1.0800	1.5349
1	10	24	10	2.6965	3.0570	3.4830
1	10	25	01	1.9355	2.7946	3.5919
1	10	25	02	1.0995	1.8015	2.6349
1	10	25	03	3.0761	3.6624	4.2729
1	10	25	04	0.2417	0.7715	1.2268
1	10	25	05	0.4958	1.1059	1.4629
1	10	25	06	1.0274	1.5902	2.0235
1	10	25	07	0.3543	1.0236	1.5652
1	10	25	08	1.1600	1.9640	2.7299
1	10	25	09	2.3139	2.9166	3.3086
1	10	25	10	0.7668	1.3475	1.6532
1	10	26	01	0.3342	0.7448	1.0583
1	10	26	02	1.7705	2.3844	2.8135
1	10	26	03	4.8224	5.3864	5.7506
1	10	26	04	4.6192	4.8430	5.0536
1	10	26	05	2.6480	3.0691	3.3268
1	10	26	06	1.7394	2.0113	2.2215
1	10	26	07	5.2429	5.4924	5.6954
1	10	26	08	0.7133	0.9857	1.2069
1	10	26	09	2.9646	3.2013	3.3999
1	10	26	10	5.2388	5.4684	5.6472
1	10	27	01	0.7413	1.7835	2.2938
1	10	27	02	2.1266	2.6690	3.2818
1	10	27	03	2.2486	2.8054	3.1792
1	10	27	04	2.4421	2.8336	3.1856
1	10	27	05	4.4331	4.9513	5.4661

1	10	28	01	2.7075	3.5770	4.5560
1	10	28	02	2.1564	2.7276	4.0644
1	10	28	03	1.9740	2.4684	2.8476
1	10	28	04	1.4304	1.9350	2.3760
1	10	28	05	2.7410	3.4058	3.9760
1	10	28	06	4.8694	5.5281	5.9838
1	10	28	07	1.7684	2.5004	3.1168
1	10	28	08	3.3792	4.4562	5.3010
1	10	28	09	1.0980	1.6080	2.0250
1	10	28	10	2.1076	2.6434	3.1282

1	10	31	01	1.2119	1.9643	2.8229
1	10	31	02	0.7530	1.5810	2.4130
1	10	31	03	1.5585	2.2381	3.0121
1	10	31	04	1.1300	1.7644	2.5619
1	10	31	05	0.7575	1.5243	2.1876
1	10	31	06	4.6865	5.4776	6.1607
1	10	31	07	0.4126	1.1134	1.6950
1	10	31	08	3.2124	3.7146	4.2158
1	10	31	09	3.5876	4.3642	5.2186
1	10	31	10	4.3216	4.9888	5.7584

1	10	32	01	0.9371	1.8732	3.2886
1	10	32	02	1.1449	2.1285	3.3648
1	10	32	03	0.9463	1.8706	3.1095
1	10	32	04	1.3613	2.1797	3.1876
1	10	32	05	0.4543	1.3075	2.3179
1	10	32	06	0.9919	2.0244	3.0799

1	10	33	01	1.0342	1.7974	2.4751
1	10	33	02	0.6401	1.4850	2.0862
1	10	33	03	0.3508	1.3662	2.0312
1	10	33	04	0.4744	1.3429	1.9709
1	10	33	05	0.4566	1.3886	1.8926
1	10	33	06	0.2544	1.2392	1.7180
1	10	33	07	0.5394	1.5014	2.1404
1	10	33	08	1.3680	2.4470	3.0110
1	10	33	09	0.3521	1.1684	1.7768
1	10	33	10	0.6240	1.6140	2.2206

1	10	35	01	2.8279	3.8514	5.1530
1	10	35	02	0.2634	1.2810	2.4710
1	10	35	03	1.3356	2.3913	3.4091
1	10	35	04	1.6599	2.6589	4.4081
1	10	35	05	0.8400	1.9127	3.7024
1	10	35	06	1.1518	2.1909	3.3459

1	10	36	01	0.9749	2.3126	3.2772
1	10	36	02	0.7767	2.0325	3.0751
1	10	36	03	0.2240	1.3160	2.3252
1	10	36	04	1.4709	2.6009	3.6575
1	10	36	05	1.2124	2.5137	3.4874

1	10	41	01	5.8099	6.1106
1	10	41	02	5.2676	5.5888
1	10	41	03	5.8188	6.1350
1	10	41	04	5.1892	5.5240
1	10	41	05	2.6979	3.0384
1	10	41	06	0.5978	0.9675
1	10	41	07	3.1910	3.5195
1	10	41	08	1.9878	2.2889
1	10	41	09	5.7942	6.1482
1	10	41	10	2.8087	3.1282

1	10	42	01	3.5284	3.8095
1	10	42	02	0.6435	0.9407
1	10	42	03	3.5556	3.8169
1	10	42	04	0.5904	0.8776
1	10	42	05	0.3515	0.6369
1	10	42	06	2.7282	3.0465
1	10	42	07	0.6429	0.9532
1	10	42	08	1.1295	1.4670
1	10	42	09	0.4922	0.7669
1	10	42	10	2.8506	3.1089

1	10	43	01	1.0055	1.2403
1	10	43	02	2.8009	3.0772
1	10	43	03	1.4547	1.7148
1	10	43	04	3.1027	3.3763
1	10	43	05	4.7907	5.0418
1	10	43	06	4.8402	5.1015
1	10	43	07	5.4652	5.7280
1	10	43	08	4.7036	4.9430
1	10	43	09	3.4868	3.7490
1	10	43	10	0.7768	1.0606
1	10	44	01	3.5128	3.6468
1	10	44	02	1.7602	1.9060
1	10	44	03	0.7448	0.9082
1	10	44	04	0.5270	0.7232
1	10	44	05	0.9568	1.1394
1	10	44	06	5.2056	5.3252
1	10	44	07	3.2032	3.3543
1	10	44	08	5.2548	5.3982
1	10	44	09	3.6656	3.8288
1	10	44	10	1.1815	1.4023
1	10	45	01	5.5170	5.6384
1	10	45	02	3.7826	3.9058
1	10	45	03	4.7172	4.8228
1	10	45	04	5.4908	5.5766
1	10	45	05	2.9500	3.0778
1	10	45	06	5.4826	5.6468
1	10	45	07	2.9768	3.0856
1	10	45	08	0.6206	0.7698
1	10	45	09	5.2312	5.3660
1	10	45	10	5.8844	6.0036
1	10	46	01	0.9419	1.0591
1	10	46	02	1.0444	1.1616
1	10	46	03	4.4040	4.5922
1	10	46	04	2.8992	3.0123
1	10	46	05	5.3312	5.4498
1	10	46	06	3.0670	3.1627
1	10	46	07	1.9638	2.0520
1	10	46	08	1.0292	1.1279
1	10	46	09	2.8613	2.9486
1	10	46	10	1.3682	1.4654

1	10	47	01	1.3993	1.7240
1	10	47	02	2.0607	2.4693
1	10	47	03	0.8790	1.2467
1	10	47	04	2.4256	2.8231
1	10	47	05	0.9360	1.3264
1	10	47	06	2.0586	2.3961
1	10	47	07	0.8406	1.1914
1	10	47	08	1.2435	1.6761
1	10	47	09	1.4700	1.8420

1	10	51	01	1.1704	1.3150
1	10	51	02	0.5508	0.7110
1	10	51	03	0.7258	0.8952
1	10	51	04	4.0724	4.2116
1	10	51	05	4.6094	4.7336
1	10	51	06	0.6604	0.7944
1	10	51	07	4.8704	5.0308
1	10	51	08	3.0512	3.2316
1	10	51	09	0.6596	0.7700
1	10	51	10	2.4278	2.5792

1	10	52	01	3.2124	3.5994
1	10	52	02	5.0161	5.2141
1	10	52	03	4.3244	4.4458
1	10	52	04	0.6375	0.7881
1	10	52	05	5.4939	5.6355
1	10	52	06	0.5477	0.7340
1	10	52	07	5.2324	5.4034
1	10	52	08	4.7097	4.8603

1	10	53	01	5.3599	5.5240
1	10	53	02	2.8897	3.0844
1	10	53	03	1.6231	1.7218
1	10	53	04	6.1033	6.2941
1	10	53	05	2.4901	2.6685
1	10	53	06	3.0206	3.1871
1	10	53	07	2.7286	2.8551
1	10	53	08	2.5524	2.6734
1	10	53	09	0.5684	0.7202

2	01	11	01	1.4980	2.4802	3.4520	4.4439	5.4586	6.4326
2	01	11	02	1.5002	2.4695	3.4852	4.5094	5.5058	6.5666
2	01	11	03	1.2609	2.2822	3.2799	4.2828	5.2303	6.1540
2	01	11	04	1.4372	2.2937	3.3908	4.4374	5.3271	6.3080
2	01	11	05	1.2957	2.2500	3.1854	4.2673	5.1395	6.1252
2	01	11	06	1.2844	2.3528	3.2804	4.1841	5.1894	6.1663
2	01	11	07	1.3634	2.3562	3.2385	4.2337	5.1892	6.2179
2	01	11	08	1.3485	2.3750	3.3297	4.2872	5.2975	6.3318
2	01	11	09	1.2896	2.2788	3.2644	4.1767	5.1856	6.1655
2	01	11	10	1.2609	2.2938	3.3424	4.3012	5.2675	6.2591

2	01	12	01	1.2300	2.1690	3.1280	4.0898	5.0492	6.0156
2	01	12	02	1.3402	2.3130	3.2230	4.2314	5.1513	6.1331
2	01	12	03	1.2821	2.4073	3.3091	4.3042	5.2442	6.2613
2	01	12	04	1.3304	2.2405	3.3258	4.2783	5.2298	6.2466
2	01	12	05	1.2572	2.1717	3.2892	4.2668	5.1691	6.0958
2	01	12	06	1.3477	2.3297	3.1983	4.1310	5.1370	6.1734
2	01	12	07	1.3588	2.2473	3.2331	4.2420	5.2098	6.1829
2	01	12	08	0.5143	1.5217	2.4883	3.4479	4.3808	5.3790
2	01	12	09	1.3820	2.2964	3.2741	4.2933	5.2549	6.2587
2	01	12	10	1.2532	2.2364	3.1594	4.1654	5.1436	6.1392

2	01	13	01	0.4828	1.3212	2.3334	3.2065	4.2526	5.2335
2	01	13	02	1.6842	2.5629	3.4757	4.4835	5.3981	6.3003
2	01	13	03	1.2430	2.2274	3.1373	4.1065	5.0337	6.0470
2	01	13	04	1.2568	2.2769	3.1995	4.1569	4.9691	6.0458
2	01	13	05	1.3056	2.3066	3.2808	4.2360	5.1773	6.1450
2	01	13	06	1.4822	2.4426	3.4512	4.2754	5.2298	6.1702
2	01	13	07	1.3466	2.2978	3.2790	4.2134	5.1570	6.1424

2	01	16	01	1.4452	2.2681	3.2216	4.1732	5.0486	6.0846
2	01	16	02	1.4812	2.3760	3.3114	4.2641	5.2204	6.1991
2	01	16	03	1.3583	2.3154	3.2301	4.2752	5.2611	6.3005
2	01	16	04	1.5111	2.4012	3.3480	4.3522	5.3258	6.3579
2	01	16	05	1.3945	2.2954	3.2946	4.3182	5.3044	6.2378
2	01	16	06	1.4252	2.3651	3.2999	4.2857	5.2590	6.2795
2	01	16	07	1.1480	2.3566	3.3730	4.2958	5.2459	6.2030
2	01	16	08	1.3476	2.2672	3.2219	4.1788	5.2379	6.2368
2	01	16	09	1.4699	2.4460	3.4294	4.4156	5.3959	6.3532
2	01	16	10	1.4088	2.3185	3.2262	4.2851	5.2550	6.2173

2	01	18	01	1.1546	1.8511	2.5928	3.3203	4.0558	4.7948
2	01	18	02	1.1034	1.8919	2.5986	3.3549	4.0571	4.7852
2	01	18	03	1.1033	1.8305	2.6124	3.3069	4.1111	4.8199
2	01	18	04	1.1228	1.8104	2.5620	3.3137	4.1009	4.7765
2	01	18	05	1.0560	1.7940	2.4994	3.1800	3.9576	4.7350
2	01	18	06	1.0031	1.7155	2.4947	3.1236	3.9064	4.6292
2	01	18	07	1.2336	1.9119	2.6656	3.3666	4.2236	4.8922
2	01	18	08	1.2101	1.9576	2.6911	3.4392	4.1792	4.8943
2	01	18	09	1.1276	1.8506	2.6035	3.3759	4.1169	4.8738
2	01	18	10	1.0959	1.8603	2.5168	3.2546	3.9970	4.7648

2	01	21	01	0.5984	1.0948	1.5946
2	01	21	02	0.6214	1.1494	1.6848
2	01	21	03	3.7746	4.2938	4.8130
2	01	21	04	1.2183	1.7691	2.3217
2	01	21	05	2.9082	3.4242	3.9546
2	01	21	06	0.3918	0.9696	1.5231
2	01	21	07	5.1746	5.7266	6.2426
2	01	21	08	0.9954	1.4994	2.0362
2	01	21	09	0.4264	0.9448	1.3930
2	01	21	10	1.1436	1.7076	2.2636

2	01	22	01	2.9546	3.2572	3.5598
2	01	22	02	5.2258	5.5794	5.9228
2	01	22	03	2.8887	3.2087	3.5512
2	01	22	04	0.7523	1.1378	1.5098
2	01	22	05	2.9037	3.2787	3.6557
2	01	22	06	3.4387	3.7862	4.1232
2	01	22	07	2.8948	3.2542	3.6154
2	01	22	08	3.5564	3.9038	4.2488
2	01	22	09	1.3950	1.7604	2.1240
2	01	22	10	3.3188	3.7238	4.0886

2	01	23	01	0.4486	0.9178	1.2316
2	01	23	02	2.9440	3.4324	3.7348
2	01	23	03	3.7916	4.3052	4.6310
2	01	23	04	3.7024	4.2310	4.5358
2	01	23	05	3.1662	3.7108	4.0188
2	01	23	06	1.2236	1.7372	2.0438
2	01	23	07	5.2788	5.7636	6.0966
2	01	23	08	3.6547	4.1489	4.5073
2	01	23	09	1.2756	1.7712	2.1234
2	01	23	10	0.9180	1.5180	1.8668

2	01	24	01	5.2517	5.6283	6.0840
2	01	24	02	1.3238	1.6520	2.1644
2	01	24	03	1.1266	1.4236	1.9000
2	01	24	04	0.5566	0.8590	1.3770
2	01	24	05	1.0400	1.3585	1.8475
2	01	24	06	3.5707	3.8794	4.3834
2	01	24	07	0.5596	0.8740	1.3240
2	01	24	08	3.8192	4.1438	4.6286
2	01	24	09	0.8776	1.2128	1.7472
2	01	24	10	3.4822	3.8320	4.3420

2	01	25	01	0.8393	1.3608	1.8262
2	01	25	02	1.1026	1.5571	1.9688
2	01	25	03	4.7306	5.2238	5.5964
2	01	25	04	1.0402	1.4974	1.9099
2	01	25	05	1.0433	1.3448	1.6104
2	01	25	06	1.0520	1.5683	2.0347
2	01	25	07	0.6912	1.2000	1.6486
2	01	25	08	4.0110	4.5470	5.0558
2	01	25	09	1.2256	1.6320	1.9913
2	01	25	10	3.4444	3.9564	4.3798

2	01	26	01	0.5402	0.8069	1.0546
2	01	26	02	3.8678	4.1447	4.4098
2	01	26	03	0.7916	1.2038	1.5788
2	01	26	04	5.0344	5.3278	5.5956
2	01	26	05	0.7942	1.1092	1.4196
2	01	26	06	3.8981	4.1585	4.3932
2	01	26	07	0.7787	1.2209	1.6141
2	01	26	08	1.0055	1.3796	1.7010
2	01	26	09	1.1969	1.5065	1.7676
2	01	26	10	3.9914	4.2589	4.5014

2	01	27	01	0.9070	1.6405	1.9680
2	01	27	02	1.7468	2.1256	2.4328
2	01	27	03	4.6137	5.0406	5.3394
2	01	27	04	1.7531	2.1456	2.4326
2	01	27	05	2.0278	2.5537	2.8900
2	01	27	06	1.6244	2.0021	2.3128
2	01	27	07	3.7833	4.1062	4.3762
2	01	27	08	5.2631	5.6399	5.9221
2	01	27	09	5.0304	5.3492	5.6168
2	01	27	10	1.3054	1.6338	1.8898

2	01	28	01	4.8035	5.0676	5.6254
2	01	28	02	2.2414	2.7609	3.1035
2	01	28	03	1.2351	1.6770	2.0462
2	01	28	04	5.5286	5.8482	6.1098
2	01	28	05	1.9459	2.3038	2.6064
2	01	28	06	4.5278	4.9226	5.2602
2	01	28	07	1.4832	1.8247	2.0792
2	01	28	08	2.0312	2.3324	2.5912
2	01	28	09	1.4580	1.8840	2.1695
2	01	31	01	0.7318	1.4164	2.0534
2	01	31	02	3.6688	4.3294	5.0429
2	01	31	03	0.3540	1.0536	1.7209
2	01	31	04	3.3960	4.2248	5.0227
2	01	31	05	4.0034	4.7612	5.4767
2	01	31	06	0.8352	1.6224	2.3744
2	01	31	07	4.0430	4.8452	5.5610
2	01	31	08	0.5926	1.3378	2.0308
2	01	31	09	3.6100	4.3786	5.0392
2	01	31	10	1.0472	1.7280	2.3760
2	01	32	01	0.3927	1.0380	1.9533
2	01	32	02	3.7038	4.4158	5.2668
2	01	32	03	1.0581	1.6694	2.4691
2	01	32	04	4.3492	5.2600	6.3006
2	01	32	05	1.3660	2.0717	3.0532
2	01	32	06	0.4106	1.1250	2.0746
2	01	32	07	3.9222	4.6682	5.6312
2	01	32	08	1.3790	2.0840	3.0770
2	01	32	09	1.3536	2.0616	3.0476
2	01	32	10	0.9396	1.6470	2.6046
2	01	33	01	0.5868	1.4964	2.0784
2	01	33	02	1.4137	2.4196	3.0646
2	01	33	03	1.0274	2.0744	2.6898
2	01	33	04	1.6148	2.5388	3.0280
2	01	33	05	0.6764	1.5604	2.0948
2	01	33	06	4.4309	5.3426	5.9456
2	01	33	07	1.2414	2.3244	2.9954
2	01	33	08	0.2628	1.2573	1.8738
2	01	33	09	3.9922	5.0245	5.6203
2	01	33	10	2.3055	3.2505	3.8328

2	01	34	01	0.3772	1.3408	2.2156
2	01	34	02	0.4204	1.3916	2.3308
2	01	34	03	0.7958	1.7858	2.7812
2	01	34	04	0.9592	1.9276	3.0625
2	01	34	05	0.8375	1.9278	2.9618
2	01	34	06	0.8091	1.8332	2.8295
2	01	34	07	0.6743	1.7116	2.7698
2	01	34	08	0.7747	1.7908	2.8015
2	01	34	09	0.7139	1.7727	2.7159
2	01	34	10	0.4206	1.4076	2.3916

2	01	35	01	0.3234	1.2990	2.2701
2	01	35	02	4.0318	5.0188	6.0388
2	01	35	03	1.0084	1.9987	3.0400
2	01	35	04	0.4105	1.4150	2.4602
2	01	35	05	4.2896	5.2568	6.2336
2	01	35	06	0.4744	1.4542	2.4802
2	01	35	07	3.9768	4.9584	5.9304
2	01	35	08	1.1622	2.1762	3.3018
2	01	35	09	0.9712	1.9172	2.9457
2	01	35	10	0.5288	1.5304	2.5972

2	01	36	01	0.3390	1.2978	2.0566
2	01	36	02	3.7102	4.6982	5.4846
2	01	36	03	4.3220	5.2960	6.1690
2	01	36	04	1.1192	2.1488	3.0024
2	01	36	05	0.5643	1.6665	2.5333
2	01	36	06	0.4836	1.7051	2.7008
2	01	36	07	0.4303	1.6400	2.6293
2	01	36	08	0.3254	1.5314	2.4746
2	01	36	09	4.1872	5.3188	6.2200
2	01	36	10	0.5613	1.6757	2.6108

2	01	41	01	1.4488	1.7570
2	01	41	02	1.3228	1.6494
2	01	41	03	4.3720	4.6877
2	01	41	04	4.2228	4.5477
2	01	41	05	4.0160	4.3609
2	01	41	06	0.4112	0.7334
2	01	41	07	1.2581	1.5037
2	01	41	08	1.2626	1.5934
2	01	41	09	3.7696	4.0741
2	01	41	10	4.6276	4.9937

2	01	42	01	1.0916	1.4086
2	01	42	02	3.9919	4.2767
2	01	42	03	3.5860	3.9043
2	01	42	04	1.3822	1.7082
2	01	42	05	1.5394	1.8352
2	01	42	06	1.1706	1.5014
2	01	42	07	3.0854	3.3894
2	01	42	08	3.3027	3.5887
2	01	42	09	4.2403	4.5415
2	01	42	10	1.6221	1.9900
2	01	43	01	1.8600	2.3622
2	01	43	02	5.4030	5.6832
2	01	43	03	1.1642	1.4467
2	01	43	04	3.9334	4.2263
2	01	43	05	1.3913	1.7004
2	01	43	06	4.4120	4.6094
2	01	43	07	0.5407	0.8330
2	01	43	08	3.8502	4.1137
2	01	43	09	1.1002	1.3557
2	01	43	10	4.4718	4.7444
2	01	44	01	1.6164	1.7290
2	01	44	02	1.5156	1.6321
2	01	44	03	1.7788	1.9322
2	01	44	04	4.7644	4.9592
2	01	44	05	1.0238	1.2152
2	01	44	06	1.4276	1.6171
2	01	44	07	3.8975	4.0679
2	01	44	08	0.9960	1.1515
2	01	44	09	4.1854	4.3669
2	01	44	10	4.9933	5.1705
2	01	45	01	4.3533	4.4721
2	01	45	02	4.1596	4.2741
2	01	45	03	1.9779	2.1282
2	01	45	04	1.6733	1.8049
2	01	45	05	1.3900	1.5300
2	01	45	06	3.6667	3.7858
2	01	45	07	4.6038	4.7192
2	01	45	08	1.5762	1.7071
2	01	45	09	4.2000	4.3241
2	01	45	10	3.5622	3.6944

2	01	46	01	1.0164	1.1225
2	01	46	02	4.3012	4.3962
2	01	46	03	4.4534	4.5806
2	01	46	04	4.0194	4.1307
2	01	46	05	4.0886	4.1993
2	01	46	06	4.0969	4.1907
2	01	46	07	1.2633	1.3411
2	01	46	08	1.7913	1.9324
2	01	46	09	1.9780	2.0792
2	01	46	10	1.3436	1.4400
2	01	47	01	0.6475	0.9199
2	01	47	02	5.2390	5.5453
2	01	47	03	1.0152	1.3488
2	01	47	04	1.5536	1.8692
2	01	47	05	4.6111	4.9582
2	01	47	06	1.7491	2.1405
2	01	47	07	4.7503	5.0970
2	01	47	08	4.5558	4.8834
2	01	47	09	1.0351	1.3903
2	01	47	10	1.2910	1.5858
2	01	48	01	4.6866	4.8592
2	01	48	02	3.8984	4.1077
2	01	48	03	1.0260	1.2418
2	01	48	04	1.3636	1.5757
2	01	48	05	4.3638	4.5533
2	01	48	06	4.9680	5.1751
2	01	48	07	1.5036	1.7163
2	01	48	08	1.1046	1.3347
2	01	48	09	4.8784	5.0917
2	01	48	10	1.4088	1.6226
2	01	49	01	1.5890	1.8018
2	01	49	02	4.9119	5.0909
2	01	49	03	4.2616	4.4672
2	01	49	04	0.7597	0.9672
2	01	49	05	4.5712	4.7694
2	01	49	06	1.4985	1.6921
2	01	49	07	1.3898	1.5954
2	01	49	08	4.1418	4.3515
2	01	49	09	4.5269	4.7322
2	01	49	10	4.6748	4.8705

2	01	50	01	1.6868	1.9060
2	01	50	02	1.2342	1.4152
2	01	50	03	0.9746	1.1900
2	01	50	04	1.3145	1.5158
2	01	50	05	4.6733	4.8530
2	01	50	06	4.7174	4.9149
2	01	50	07	1.1799	1.3872
2	01	50	08	1.4164	1.6302
2	01	50	09	1.1520	1.3705
2	01	50	10	4.6151	4.8276
2	01	51	01	3.1050	3.2963
2	01	51	02	5.2046	5.4016
2	01	51	03	1.1120	1.3580
2	01	51	04	0.6259	0.8794
2	01	51	05	3.7319	3.9285
2	01	51	06	6.1472	6.3580
2	01	51	07	3.4928	3.7043
2	01	51	08	1.1235	1.3365
2	01	51	09	6.0947	6.2975
2	01	51	10	3.2246	3.3968
2	01	52	01	5.5054	5.6820
2	01	52	02	0.9392	1.1120
2	01	52	03	4.2653	4.4705
2	01	52	04	5.5934	5.8055
2	01	52	05	1.1577	1.3284
2	01	52	06	3.6677	3.8576
2	01	52	07	5.5920	5.7900
2	01	52	08	1.2278	1.3979
2	01	52	09	0.8936	1.0676
2	01	52	10	0.9864	1.1478
2	01	53	01	0.9515	1.1027
2	01	53	02	3.1401	3.3030
2	01	53	03	0.8564	1.0193
2	01	53	04	3.1712	3.3647
2	01	53	05	6.0053	6.1865
2	01	53	06	1.0159	1.2010
2	01	53	07	1.0618	1.2319
2	01	53	08	3.9126	4.0962
2	01	53	09	3.4942	3.6571
2	01	53	10	5.7317	5.8922

2	02	11	01	0.6249	1.4772	2.3948	3.3624	4.3630	5.3344
2	02	11	02	1.2771	2.2153	3.1846	4.1850	5.1012	6.1475
2	02	11	03	1.2530	2.1828	3.1066	4.0835	5.1464	6.0888
2	02	11	04	1.3211	2.2070	3.1676	4.1884	5.1874	6.1466
2	02	11	05	1.2924	2.2291	3.1631	4.1363	5.1854	6.1371
2	02	11	06	1.2121	2.1970	3.1985	4.2196	5.1403	6.0934
2	02	11	07	1.1472	2.0798	3.0145	2.0202	4.9944	6.0004
2	02	11	08	1.3641	2.3304	3.3042	4.3161	5.3355	6.2878
2	02	11	09	1.2334	2.1519	3.1214	4.0632	5.1198	6.1329
2	02	11	10	0.3990	1.2592	2.3238	3.3616	4.3492	5.2990
2	02	12	01	1.4038	2.3079	3.3733	4.2648	5.2159	6.2346
2	02	12	02	1.3691	2.3132	3.2996	4.2643	5.2457	6.2103
2	02	12	03	1.4029	2.4014	3.3784	4.3566	5.3976	6.3032
2	02	12	04	1.4161	2.3166	3.3514	4.3765	5.3035	6.3629
2	02	12	05	1.2658	2.1964	3.1556	4.1560	5.1440	6.0414
2	02	12	06	1.2493	2.1938	3.2272	4.1334	5.1947	6.1618
2	02	12	07	1.2695	2.1665	3.1806	4.1616	5.2298	6.1264
2	02	12	08	1.4481	2.3066	3.3056	4.2203	5.1459	6.1575
2	02	12	09	1.3615	2.3052	3.2678	4.2214	5.2846	6.2966
2	02	13	01	1.2114	2.1858	3.1804	4.1238	5.1170	6.0848
2	02	13	02	1.2652	2.1506	3.1668	4.2124	5.2360	6.1521
2	02	13	03	0.4741	1.3976	2.3630	3.3170	4.3730	5.2426
2	02	13	04	1.3516	2.2892	3.2593	4.1836	5.2118	6.1334
2	02	13	05	1.1500	2.1114	3.0791	4.0056	5.0426	5.9910
2	02	13	06	1.2312	2.2122	3.2990	4.1260	5.1434	6.0794
2	02	13	07	1.2802	2.2158	3.2048	4.1370	5.1660	6.0798
2	02	13	08	1.3059	2.2572	3.2474	4.0926	5.1486	6.0890
2	02	13	09	1.2538	2.1546	3.0891	4.1234	5.1152	6.0928
2	02	13	10	1.2862	2.2559	3.2459	4.2096	5.2318	6.2803
2	02	16	01	0.3531	1.2961	2.3170	3.3685	4.3081	5.3456
2	02	16	02	1.3124	2.2234	3.2623	4.2322	5.2340	6.2812
2	02	16	03	1.3886	2.3040	3.2824	4.2873	5.2552	6.1722
2	02	16	04	1.3319	2.2201	3.3039	4.4084	5.4115	5.4115
2	02	16	05	1.3315	2.2664	3.2408	4.1969	5.1916	6.1850
2	02	16	06	1.3543	2.3637	2.3507	4.3762	5.3354	6.2844
2	02	16	07	1.3497	2.2813	3.3593	4.3286	5.3215	6.2822
2	02	16	08	1.3643	2.3230	3.2504	4.3557	5.2739	6.2775
2	02	16	09	1.3945	2.3074	3.2782	4.3116	5.3098	6.2613
2	02	16	10	1.4200	2.3094	3.3161	4.3376	5.2470	6.3105

2	02	18	01	0.6718	1.5182	2.2520	2.9576	3.6766	4.4252
2	02	18	02	1.1568	1.8412	2.6614	3.3993	4.1448	4.8508
2	02	18	03	1.5892	2.3667	3.1441	3.9961	4.7772	5.4896
2	02	18	04	1.2308	1.9438	2.6930	3.3962	4.2299	4.9140
2	02	18	05	1.5986	2.3475	3.1015	3.8335	4.5813	5.3074
2	02	18	06	1.6946	2.4210	3.2164	3.9701	4.6813	5.4500
2	02	18	07	1.8247	2.5287	3.3040	4.0570	4.7940	5.5056
2	02	18	08	1.1752	1.8741	2.6377	3.3298	4.1153	4.8307
2	02	18	09	0.4609	1.1496	1.9067	2.6000	3.3607	4.1196
2	02	18	10	1.5313	2.2386	3.0251	3.7097	4.4468	5.1709

2	02	21	01	0.4048	0.9334	1.4704
2	02	21	02	3.8886	4.4096	4.9722
2	02	21	03	3.1380	3.6060	4.0884
2	02	21	04	0.9629	1.5124	1.9968
2	02	21	05	0.9854	1.4712	2.0403
2	02	21	06	1.0916	1.5554	2.0252
2	02	21	07	0.5301	1.0411	1.5507
2	02	21	08	0.5019	0.9939	1.5315
2	02	21	09	1.1552	1.6452	2.1779
2	02	21	10	3.0043	3.5251	4.0662

2	02	22	01	3.2126	3.5648	3.8834
2	02	22	02	0.8933	1.2568	1.6003
2	02	22	03	0.7839	1.1529	1.4679
2	02	22	04	3.1814	3.5174	3.8219
2	02	22	05	3.6136	3.9448	4.2408
2	02	22	06	3.5698	3.9430	4.2828
2	02	22	07	0.7174	1.1049	1.4369
2	02	22	08	3.2493	3.5763	3.9073
2	02	22	09	0.9097	1.2687	1.6452
2	02	22	10	3.3043	3.6408	3.9573

2	02	23	01	3.2949	3.8229	4.0564
2	02	23	02	1.0006	1.5481	1.8131
2	02	23	03	0.9200	1.4475	1.7170
2	02	23	04	0.7812	1.3112	1.5937
2	02	23	05	3.0261	3.5926	3.8426
2	02	23	06	3.4616	3.9968	4.2812
2	02	23	07	3.1078	3.6208	3.9424
2	02	23	08	3.0715	3.5720	3.8660
2	02	23	09	0.9422	1.4897	1.7702
2	02	23	10	0.8444	1.3466	1.6538

2	02	24	01	3.4720	3.7732	4.3630
2	02	24	02	1.1355	1.4740	1.8745
2	02	24	03	2.9961	3.3081	3.8266
2	02	24	04	1.2659	1.5579	2.0539
2	02	24	05	3.6508	3.9398	4.4058
2	02	24	06	1.2232	1.4950	1.9828
2	02	24	07	0.7614	1.0799	1.5359
2	02	24	08	3.6525	3.9755	4.4485
2	02	24	09	0.9247	1.2437	1.7172
2	02	24	10	3.4392	3.7657	4.2642
2	02	25	01	1.1726	1.4534	1.7646
2	02	25	02	3.9942	4.3278	4.6146
2	02	25	03	4.7903	5.1133	5.4002
2	02	25	04	4.9910	5.3175	5.5905
2	02	25	05	0.6610	1.0150	1.2780
2	02	25	06	1.4268	1.7328	2.0368
2	02	25	07	1.3736	1.6724	2.0426
2	02	25	08	1.0651	1.4241	1.7746
2	02	25	09	1.2022	1.5287	1.8077
2	02	26	01	1.4904	1.7764	2.0252
2	02	26	02	4.3532	4.5816	4.8032
2	02	26	03	1.2674	1.5489	1.8032
2	02	26	04	1.8284	2.1068	2.3956
2	02	26	05	4.3196	4.5524	4.7876
2	02	26	06	5.3460	5.5716	5.7844
2	02	26	07	1.5618	1.8458	2.0962
2	02	26	08	4.9366	5.2430	5.4810
2	02	26	09	4.5796	4.8324	5.0964
2	02	26	10	4.0386	4.3026	4.5686
2	02	27	01	4.2333	4.9139	5.1631
2	02	27	02	1.4300	2.1134	2.3216
2	02	27	03	1.0311	1.4986	1.8806
2	02	27	04	1.4031	1.8469	2.5140
2	02	27	05	1.1384	1.5530	2.0330
2	02	27	06	1.6883	2.1146	2.8188
2	02	27	07	4.1868	4.6362	5.0880
2	02	27	08	1.7169	2.1600	2.7970
2	02	27	09	1.3108	1.6804	2.1286
2	02	27	10	0.7050	1.1310	1.5840

2	02	28	01	1.2144	1.6274	1.9969
2	02	28	02	3.6132	4.0566	4.3734
2	02	28	03	1.0311	1.4986	1.8806
2	02	28	04	1.4031	1.8469	2.5140
2	02	28	05	1.1384	1.5530	2.0330
2	02	28	06	1.6883	2.1146	2.8188
2	02	28	07	4.1868	4.6362	5.0880
2	02	28	08	1.7169	2.1600	2.7970
2	02	28	09	1.3108	1.6804	2.1286
2	02	28	10	0.7050	1.1310	1.5840
2	02	31	01	0.4302	1.2086	1.9318
2	02	31	02	4.0622	4.7984	5.5164
2	02	31	03	4.8122	5.5164	6.1926
2	02	31	04	1.0658	1.7994	2.5378
2	02	31	05	4.6834	5.4690	6.1406
2	02	31	06	0.9418	1.7034	2.3873
2	02	31	07	4.3034	5.0216	5.6873
2	02	31	08	1.1204	1.7420	2.4882
2	02	31	09	4.4318	5.1654	5.8521
2	02	31	10	0.8432	1.5628	2.2733
2	02	32	01	0.6270	1.4118	2.4014
2	02	32	02	4.2327	5.0958	6.1803
2	02	32	03	1.0446	1.9176	3.0777
2	02	32	04	0.3627	1.2726	2.2356
2	02	32	05	4.2461	5.2082	6.2567
2	02	32	06	0.8199	1.6981	2.7999
2	02	32	07	0.7716	1.6340	2.5052
2	02	32	08	1.3753	2.2978	3.2050
2	02	32	09	1.3952	2.2432	3.1376
2	02	32	10	1.3608	2.1736	3.1106
2	02	33	01	0.2526	1.2756	1.8910
2	02	33	02	4.1243	5.1296	5.6624
2	02	33	03	1.3508	2.3831	2.9690
2	02	33	04	4.2711	5.7714	6.2826
2	02	33	05	0.2251	1.2400	1.8460
2	02	33	06	3.8272	4.8742	5.5162
2	02	33	07	1.5309	2.4696	3.0753
2	02	33	08	0.9156	2.2391	2.9402
2	02	33	09	1.2986	2.2391	2.9402
2	02	33	10	1.2802	2.3467	2.8894

2	02	34	01	0.4822	1.5512	2.6642
2	02	34	02	0.4326	1.4766	2.6466
2	02	34	03	0.3190	1.4056	2.4716
2	02	34	04	0.5642	1.6882	2.7962
2	02	34	05	0.9387	1.9717	3.2267
2	02	34	06	0.9861	2.0013	3.1020
2	02	34	07	0.5332	1.5822	2.7912
2	02	34	08	0.5473	1.5424	2.6431
2	02	34	09	0.7285	1.7716	2.8219
2	02	34	10	0.7605	1.8608	2.9328

2	02	35	01	0.4050	1.4076	2.4039
2	02	35	02	0.8490	1.7506	2.6514
2	02	35	03	1.2940	2.2460	3.1636
2	02	35	04	0.8362	1.7410	2.7306
2	02	35	05	0.8604	1.8156	2.7580
2	02	35	06	0.9882	1.9746	2.9727
2	02	35	07	0.8085	1.7778	2.7669
2	02	35	08	1.4593	1.3937	2.3497
2	02	35	09	1.1972	2.1356	3.1044
2	02	35	10	0.9171	1.9017	2.8980

2	02	36	01	0.3878	1.3166	2.0338
2	02	36	02	0.8010	1.7490	2.6450
2	02	36	03	4.5914	5.5458	6.3858
2	02	36	04	0.9580	1.8828	2.6908
2	02	36	05	4.5582	5.5046	6.2798
2	02	36	06	0.9624	1.9240	2.7864
2	02	36	07	0.3586	1.3330	2.1954
2	02	36	08	4.1212	5.0628	5.8740
2	02	36	09	1.6168	2.5528	3.3968
2	02	36	10	1.4516	2.3371	3.1309

2	02	41	01	1.9294	2.2636
2	02	41	02	4.6300	4.9777
2	02	41	03	4.1769	4.5295
2	02	41	04	1.0180	1.3842
2	02	41	05	1.3814	1.7946
2	02	41	06	1.3509	1.7817
2	02	41	07	1.3422	1.6762
2	02	41	08	4.1007	4.4730
2	02	41	09	3.7689	4.1515
2	02	41	10	1.1710	1.5408

2	02	42	01	0.9111	1.3086
2	02	42	02	4.0090	4.3982
2	02	42	03	4.2613	4.6291
2	02	42	04	4.1202	4.5546
2	02	42	05	4.1914	4.5850
2	02	42	06	4.3502	4.7310
2	02	42	07	1.1165	1.4855
2	02	42	08	1.1294	1.5032
2	02	42	09	3.7524	4.1268
2	02	42	10	3.7144	4.0170
2	02	43	01	1.4023	1.7299
2	02	43	02	1.5324	1.8673
2	02	43	03	1.1822	1.4936
2	02	43	04	1.1453	1.4867
2	02	43	05	3.6535	3.9799
2	02	43	06	1.1146	1.4934
2	02	43	07	4.5404	4.8932
2	02	43	08	1.3889	1.6970
2	02	43	09	3.9668	4.3860
2	02	43	10	1.0530	1.3634
2	02	44	01	4.9200	5.0808
2	02	44	02	3.8864	4.0670
2	02	44	03	1.3038	1.4895
2	02	44	04	1.2365	1.4027
2	02	44	05	1.0074	1.1572
2	02	44	06	3.3866	3.5552
2	02	44	07	4.3490	4.5413
2	02	44	08	4.7564	4.9163
2	02	44	09	1.2414	1.3842
2	02	44	10	3.8444	4.0046
2	02	45	01	1.4938	1.6708
2	02	45	02	3.7810	3.9766
2	02	45	03	4.5683	4.7615
2	02	45	04	1.7014	1.8718
2	02	45	05	4.2555	4.4388
2	02	45	06	1.7924	1.9907
2	02	45	07	4.4950	4.6900
2	02	45	08	1.4750	1.6436
2	02	45	09	1.2078	1.3917
2	02	45	10	0.8988	1.0632

2	02	46	01	0.4978	0.6394
2	02	46	02	2.9874	3.1180
2	02	46	03	1.5996	1.7942
2	02	46	04	3.7996	3.9240
2	02	46	05	4.4212	4.5574
2	02	46	06	1.4920	1.6064
2	02	46	07	1.5574	1.6966
2	02	46	08	2.0743	2.2429
2	02	46	09	3.5454	3.7664
2	02	46	10	3.5262	3.6472
2	02	47	01	5.2771	5.6926
2	02	47	02	1.4435	1.8881
2	02	47	03	2.0540	2.4587
2	02	47	04	1.5995	2.0417
2	02	47	05	1.5041	1.9592
2	02	47	06	4.4419	4.8559
2	02	47	07	5.0664	5.4720
2	02	47	08	4.5516	5.0056
2	02	47	09	5.0384	5.4353
2	02	47	10	4.6573	5.0572
2	02	48	01	1.7202	1.9689
2	02	48	02	4.5579	4.7973
2	02	48	03	4.6535	4.8800
2	02	48	04	4.5178	4.7719
2	02	48	05	4.4382	4.6692
2	02	48	06	4.9522	5.1940
2	02	48	07	1.7029	1.9477
2	02	48	08	1.2588	1.5168
2	02	48	09	1.2525	1.5015
2	02	48	10	1.2820	1.5565
2	02	49	01	5.0152	5.2328
2	02	49	02	1.5552	1.7814
2	02	49	03	1.3401	1.5729
2	02	49	04	1.5022	1.7503
2	02	49	05	1.1843	1.4006
2	02	49	06	1.2850	1.5282
2	02	49	07	1.7037	1.9581
2	02	49	08	5.0601	5.2917
2	02	49	09	4.7411	4.9931
2	02	49	10	4.5401	4.7717

2	02	50	01	1.5766	1.8013
2	02	50	02	5.0055	5.2329
2	02	50	03	4.9759	5.2444
2	02	50	04	4.8974	5.1557
2	02	50	05	4.4340	4.7208
2	02	50	06	1.2632	1.4866
2	02	50	07	4.6252	4.8840
2	02	50	08	1.2250	1.4911
2	02	50	09	1.0819	1.3360
2	02	50	10	1.1855	1.4201
2	02	51	01	4.2262	4.4395
2	02	51	02	1.0717	1.3261
2	02	51	03	1.1982	1.4247
2	02	51	04	3.8396	4.0457
2	02	51	05	3.7581	4.0161
2	02	51	06	1.4851	1.7146
2	02	51	07	3.9066	4.1211
2	02	51	08	1.1270	1.3778
2	02	51	09	3.7562	3.9590
2	02	51	10	1.1831	1.4120
2	02	52	01	5.2460	5.4096
2	02	52	02	3.6297	3.8511
2	02	52	03	3.5168	3.6803
2	02	52	04	1.1146	1.2985
2	02	52	05	4.0442	4.2248
2	02	52	06	3.8160	4.0134
2	02	52	07	1.0072	1.1920
2	02	52	08	4.2231	4.5141
2	02	52	09	0.9184	1.0789
2	02	52	10	1.2582	1.4364
2	02	53	01	1.3744	1.5652
2	02	53	02	1.4012	1.5782
2	02	53	03	4.0904	4.2443
2	02	53	04	1.4817	1.6458
2	02	53	05	1.0556	1.2126
2	02	53	06	1.2742	1.4566
2	02	53	07	1.3876	1.5532
2	02	53	08	3.8184	3.9786
2	02	53	09	3.8153	3.9848
2	02	53	10	0.8603	1.0523

2	03	11	01	1.3716	2.2499	3.3040	4.2728	5.3446	6.2709
2	03	11	02	1.2876	2.2437	3.2681	4.2467	5.2323	6.1852
2	03	11	03	1.2234	2.1392	3.1776	4.1464	5.1797	6.1588
2	03	11	04	1.2466	2.2177	3.1900	4.1178	5.2051	6.1450
2	03	11	05	1.3527	2.2830	3.3601	4.2895	5.3513	6.2681
2	03	11	06	1.3192	2.2950	3.3501	4.2275	5.2611	6.2185
2	03	11	07	1.4790	2.4008	3.3706	4.3803	5.3608	6.3005
2	03	11	08	1.1656	2.1369	3.2064	4.0916	5.0861	6.1034
2	03	11	09	1.1666	2.1413	3.1549	4.1384	5.1707	6.1274
2	03	11	10	1.2955	2.2517	3.2726	4.2111	5.2452	6.2353
2	03	12	01	0.4296	1.4771	2.4868	3.5508	4.4473	5.4768
2	03	12	02	1.3292	2.2813	3.3146	4.4048	5.3452	6.4146
2	03	12	03	1.3402	2.2554	3.2878	4.3361	5.2974	6.2546
2	03	12	04	1.3858	2.3249	3.3356	4.3268	5.4056	6.3623
2	03	12	05	1.3120	2.2527	3.2737	4.2526	5.3758	6.3061
2	03	12	06	1.2448	2.1298	3.1515	4.1674	5.2041	6.2394
2	03	12	07	1.0712	2.0706	3.1352	4.1017	5.0620	6.1769
2	03	12	08	1.2220	2.1816	3.2322	4.2584	5.2973	6.2482
2	03	12	09	1.1812	2.2120	3.2098	4.1815	5.2350	6.2672
2	03	12	10	1.2468	2.2139	3.2333	4.2741	5.3084	6.2385
2	03	13	01	1.3312	2.2527	3.2872	4.2779	5.2886	6.3308
2	03	13	02	1.2142	2.1847	3.1738	4.2204	5.1797	6.3078
2	03	13	03	1.1082	2.0800	3.1174	4.1203	5.0896	6.1625
2	03	13	04	1.2516	2.1900	3.2060	4.1478	5.2565	6.1929
2	03	13	05	1.3132	2.3387	3.3350	4.4066	5.2996	6.2634
2	03	13	06	1.2310	2.2082	3.2116	4.2164	5.2148	6.2190
2	03	13	07	1.3138	2.2340	3.2488	4.2296	5.2602	6.2403
2	03	13	08	1.2125	2.1839	3.2220	4.2510	5.2538	6.2728
2	03	13	09	1.1389	2.1841	3.2506	4.1983	5.1916	6.2146
2	03	13	10	1.2094	2.2004	3.2806	4.2708	5.2886	6.2312
2	03	16	01	1.2853	2.3127	3.3322	4.3962	5.3873	6.3768
2	03	16	02	0.2886	1.3618	2.3974	3.4368	4.4278	5.4236
2	03	16	03	0.2704	1.3268	2.3330	3.3824	4.3279	5.3297
2	03	16	04	0.2551	1.3186	2.3460	3.3137	4.2961	5.3154
2	03	16	05	0.2821	1.3217	2.3364	3.3910	4.3744	5.3707
2	03	16	06	0.5194	1.5744	2.5788	3.5714	4.6109	5.6472
2	03	16	07	0.5455	1.6215	2.6027	3.5866	4.6179	5.6127
2	03	16	08	0.4550	1.5108	2.4656	3.4970	4.5037	5.5968
2	03	16	09	0.8166	1.8520	2.9192	3.9326	4.9016	5.8949
2	03	16	10	0.4557	1.5146	2.5588	3.5467	4.4902	5.5038

2	03	18	01	1.7677	2.5550	3.2673	4.0491	4.7670	5.5600
2	03	18	02	1.2820	2.0708	2.8159	3.5621	4.3283	5.0917
2	03	18	03	0.8072	1.5823	2.3171	3.1026	3.8169	4.5843
2	03	18	04	0.3129	1.0671	1.8551	2.6006	3.3385	4.1096
2	03	18	05	0.5712	1.3418	2.1161	2.8870	3.6441	4.3949
2	03	18	06	1.7316	2.4966	3.2708	3.9998	4.7490	5.4918
2	03	18	07	1.1217	1.8598	2.6382	3.4027	4.1836	4.8758
2	03	18	08	1.0901	1.8508	2.5695	3.3273	4.0970	4.8207
2	03	18	09	0.5984	1.3306	2.1039	2.8620	3.6265	4.3170
2	03	18	10	0.3561	1.0770	1.8155	2.5275	3.3137	4.0835

2	03	21	01	0.8343	1.3078	1.7728
2	03	21	02	3.3920	3.8545	4.3045
2	03	21	03	2.9280	3.2472	3.5415
2	03	21	04	5.4198	5.8454	6.2862
2	03	21	05	0.8106	1.2702	1.7314
2	03	21	06	3.3060	3.7768	4.2412
2	03	21	07	0.3846	0.8476	1.3421
2	03	21	08	2.9712	3.3448	3.7212
2	03	21	09	1.5243	1.9773	2.4368
2	03	21	10	2.5174	3.0139	3.5009

2	03	22	01	0.4530	0.7814	1.1062
2	03	22	02	2.4092	2.7280	3.0452
2	03	22	03	1.0015	1.3441	1.6579
2	03	22	04	2.9110	3.2290	3.5414
2	03	22	05	5.1128	5.5508	5.9600
2	03	22	06	0.7718	1.1266	1.4674
2	03	22	07	2.8866	3.2442	3.5914
2	03	22	08	2.0856	2.4165	2.7609
2	03	22	09	4.1746	4.5202	4.8686
2	03	22	10	0.7190	1.0734	1.4274

2	03	23	01	4.5890	4.9967	5.2961
2	03	23	02	0.8691	1.3173	1.5678
2	03	23	03	1.2132	1.6408	1.9140
2	03	23	04	3.3020	3.7228	3.9952
2	03	23	05	4.9684	5.3708	5.6380
2	03	23	06	3.1930	3.6816	3.8853
2	03	23	07	0.6792	1.1536	1.4356
2	03	23	08	0.5652	1.0592	1.3696
2	03	23	09	2.8860	3.4068	3.6840
2	03	23	10	5.3062	5.8382	6.1146

2	03	24	01	3.5617	3.7654	4.1719
2	03	24	02	5.6233	5.8654	6.2515
2	03	24	03	0.8626	1.0975	1.4896
2	03	24	04	3.0501	3.2829	3.6678
2	03	24	05	5.2111	5.4364	5.8279
2	03	24	06	1.0350	1.2663	1.6398
2	03	24	07	5.0477	3.3147	5.7713
2	03	24	08	5.3106	5.5527	5.9478
2	03	24	09	0.6486	0.8607	1.2600
2	03	24	10	3.0451	3.2821	3.6898

2	03	25	01	0.4575	0.7959	1.0329
2	03	25	02	3.9770	4.3390	4.5890
2	03	25	03	1.0028	1.3504	1.6084
2	03	25	04	0.9647	1.3037	1.5212
2	03	25	05	3.5498	3.8982	4.1398
2	03	25	06	0.8765	1.2449	1.4951
2	03	25	07	0.8302	1.1918	1.4270
2	03	25	08	3.6144	3.9620	4.2172
2	03	25	09	0.6782	1.0257	1.2622
2	03	25	10	0.6944	1.0572	1.3008

2	03	26	01	2.7826	3.0586	3.2866
2	03	26	02	0.8674	1.1386	1.3530
2	03	26	03	3.3872	3.6521	3.8222
2	03	26	04	3.5474	3.7950	4.0242
2	03	26	05	0.7939	1.0432	1.2583
2	03	26	06	3.0494	3.3149	3.5369
2	03	26	07	3.0638	3.3257	3.5345

2	03	27	01	5.1046	5.5522	5.8190
2	03	27	02	3.3598	3.8230	4.0630
2	03	27	03	0.9140	1.3236	1.5688
2	03	27	04	0.9953	1.4118	1.6513
2	03	27	05	0.7007	0.9875	1.2032
2	03	27	06	3.7332	4.1536	4.3824
2	03	27	07	2.9316	3.2924	3.6016
2	03	27	08	3.0248	3.4304	3.6876
2	03	27	09	0.8778	1.2754	1.5018
2	03	27	10	1.0872	1.5520	1.7948

2	03	28	01	3.0672	3.4484	3.7576
2	03	28	02	0.5160	0.9292	1.3040
2	03	28	03	1.0898	1.5374	1.9034
2	03	28	04	3.1294	3.5078	3.8238
2	03	28	05	3.5000	4.0628	4.1804
2	03	28	06	1.0874	1.4482	1.8118
2	03	28	07	3.3646	3.7286	4.0906
2	03	28	08	3.5688	3.9352	4.3056
2	03	28	09	3.8402	4.2218	4.5754

2	03	31	01	0.2906	1.1180	1.8845
2	03	31	02	1.0014	4.8386	5.6450
2	03	31	03	1.2098	2.0001	2.8233
2	03	31	04	1.3864	2.1599	2.9875
2	03	31	05	0.2590	1.0661	1.9229
2	03	31	06	4.3062	5.1079	5.8954
2	03	31	07	1.2723	2.0891	2.8835
2	03	31	08	1.4823	2.2927	3.0911
2	03	31	09	1.5879	2.4325	3.2683
2	03	31	10	1.2092	2.0520	2.8647

2	03	32	01	3.3588	4.0564	4.9700
2	03	32	02	0.4702	1.0623	2.0162
2	03	32	03	4.6906	5.3214	6.2368
2	03	32	04	1.3100	1.9659	2.8560
2	03	32	05	0.3245	1.0462	1.9612
2	03	32	06	0.5946	1.2912	2.2112
2	03	32	07	4.2530	4.9804	5.8994
2	03	32	08	1.1861	1.8730	2.7520
2	03	32	09	4.4622	5.1880	6.1000
2	03	32	10	1.0946	1.8738	2.8338

2	03	33	01	0.2824	1.2561	1.8308
2	03	33	02	3.5853	4.4925	5.0378
2	03	33	03	1.2060	2.1342	2.7110
2	03	33	04	4.6621	5.6582	6.3120
2	03	33	05	0.9216	1.9032	2.5888
2	03	33	06	4.4978	5.5154	6.3904
2	03	33	07	1.1916	2.2860	3.0044
2	03	33	08	0.3242	1.4386	2.1522
2	03	33	09	3.9094	4.9190	5.5958
2	03	33	10	0.8100	1.8018	2.5034

2	03	34	01	0.3354	1.2370	2.2106
2	03	34	02	4.2612	5.2068	6.1132
2	03	34	03	0.6006	1.5614	2.4742
2	03	34	04	1.0924	1.9688	2.8522
2	03	34	05	0.7103	1.6127	2.5495
2	03	34	06	0.7842	1.6634	2.6226
2	03	34	07	1.3424	2.2736	3.1904
2	03	34	08	1.0054	1.8974	2.8206
2	03	34	09	1.0992	2.0048	2.9888

2	03	35	01	0.3937	1.2078	2.0100
2	03	35	02	3.8294	4.6790	5.5966
2	03	35	03	0.9548	1.8588	2.7260
2	03	35	04	0.3013	1.2634	2.2129
2	03	35	05	4.1100	5.0556	5.9884
2	03	35	06	0.9536	1.8842	2.8022
2	03	35	07	4.4786	5.3842	6.2418
2	03	35	08	0.8316	1.7228	2.6204
2	03	35	09	4.2394	5.1402	6.0130
2	03	35	10	0.9018	1.7970	2.6674

2	03	36	01	0.3426	1.2402	2.0730
2	03	36	02	3.9374	4.8422	5.7222
2	03	36	03	0.3750	1.2734	2.1598
2	03	36	04	4.1610	5.1122	5.9170
2	03	36	05	1.4930	2.0349	2.8731
2	03	36	06	1.2930	2.2443	3.0858
2	03	36	07	1.2944	2.2360	3.0064
2	03	36	08	0.3330	1.2946	2.0922
2	03	36	09	4.3868	5.2884	6.1180

2	03	41	01	1.5530	1.9426
2	03	41	02	1.1976	1.6128
2	03	41	03	0.7794	1.1650
2	03	41	04	1.1498	1.5678
2	03	41	05	1.2084	1.5921
2	03	41	06	1.3354	1.7050
2	03	41	07	5.6562	6.0072
2	03	41	08	1.2700	1.6315
2	03	41	09	2.6903	3.0287
2	03	41	10	2.9202	3.2862

2	03	42	01	1.0355	1.3583
2	03	42	02	3.4231	3.7375
2	03	42	03	0.9787	1.2871
2	03	42	04	3.6748	3.9919
2	03	42	05	0.9934	1.3099
2	03	42	06	3.6809	3.9779
2	03	42	07	3.4187	3.7244
2	03	42	08	3.5878	3.9103
2	03	42	09	3.2361	3.5349
2	03	42	10	5.1836	5.4938
2	03	43	01	0.5277	0.8136
2	03	43	02	2.8595	3.1868
2	03	43	03	5.9374	6.2398
2	03	43	04	3.7381	4.0672
2	03	43	05	3.1186	3.4166
2	03	43	06	3.4301	3.7388
2	03	43	07	0.9297	1.2309
2	03	43	08	0.8247	1.1298
2	03	43	09	0.0940	0.4276
2	03	43	10	0.4162	0.7312
2	03	44	01	1.3118	1.4579
2	03	44	02	1.3461	1.4850
2	03	44	03	3.0990	3.2418
2	03	44	04	1.1910	1.3110
2	03	44	05	5.8568	6.0146
2	03	44	06	3.5078	3.6809
2	03	44	07	0.6218	0.8066
2	03	44	08	0.6560	0.8074
2	03	44	09	1.2752	1.4410
2	03	44	10	1.4118	1.5732
2	03	45	01	1.3745	1.5164
2	03	45	02	2.7724	2.8854
2	03	45	03	5.4210	5.5374
2	03	45	04	0.8346	0.9558
2	03	45	05	3.2952	3.4286
2	03	45	06	0.6298	0.7722
2	03	45	07	3.1924	3.3456
2	03	45	08	1.1642	1.3148
2	03	45	09	0.9082	1.0540
2	03	45	10	3.5760	3.7137

2	03	46	01	0.4896	0.6038
2	03	46	02	4.9802	5.1218
2	03	46	03	0.4074	0.5366
2	03	46	04	3.7708	3.8906
2	03	46	05	1.0480	1.1768
2	03	46	06	3.6630	3.7972
2	03	46	07	5.4988	5.6424
2	03	46	08	3.5352	3.7010
2	03	46	09	3.6488	3.7768
2	03	46	10	3.5153	3.6683
2	03	47	01	1.1674	1.6258
2	03	47	02	4.0682	4.5646
2	03	47	03	0.7788	1.2396
2	03	47	04	0.9577	1.4507
2	03	47	05	4.0420	4.5328
2	03	47	06	0.9844	1.5380
2	03	47	07	3.7781	4.3112
2	03	47	08	4.8124	5.2912
2	03	47	09	1.2203	1.6625
2	03	47	10	4.0670	4.5620
2	03	48	01	3.9204	4.1019
2	03	48	02	1.0409	1.2059
2	03	48	03	0.9333	1.1168
2	03	48	04	4.4054	4.6061
2	03	48	05	1.0918	1.2865
2	03	48	06	3.8186	4.0223
2	03	48	07	0.8284	1.0174
2	03	48	08	1.3237	1.5100
2	03	48	09	3.6100	3.8041
2	03	48	10	0.8934	1.0863
2	03	49	01	0.8051	0.9689
2	03	49	02	0.8453	1.0286
2	03	49	03	2.9179	3.1162
2	03	49	04	1.1413	1.3444
2	03	49	05	4.3246	4.4974
2	03	49	06	0.9080	1.1008
2	03	49	07	4.7375	4.9247
2	03	49	08	4.2250	4.4056
2	03	49	09	0.8459	1.0335
2	03	49	10	3.8250	4.0173

2	03	50	01	3.8022	3.9836
2	03	50	02	4.0355	4.2191
2	03	50	03	3.6729	3.8452
2	03	50	04	3.1994	3.3864
2	03	50	05	0.8730	1.0614
2	03	50	06	0.5482	0.7438
2	03	50	07	1.0849	1.2514
2	03	50	08	1.3343	1.5401
2	03	50	09	3.8652	4.0766
2	03	50	10	0.6039	0.7917

2	03	51	01	5.4578	5.6552
2	03	51	02	3.0906	3.2814
2	03	51	03	0.7976	1.0038
2	03	51	04	2.5362	2.7290
2	03	51	05	0.6530	0.8620
2	03	51	06	2.7046	2.9070
2	03	51	07	2.8348	3.0268
2	03	51	08	5.4964	5.7042
2	03	51	09	3.0198	3.2008
2	03	51	10	4.4362	4.6004

2	03	52	01	2.4920	2.6306
2	03	52	02	0.7620	0.9022
2	03	52	03	0.9654	1.0874
2	03	52	04	4.6622	4.7866
2	03	52	05	4.4274	4.5654
2	03	52	06	4.8796	5.0286
2	03	52	07	0.8718	1.0138
2	03	52	08	0.9058	1.0436
2	03	52	09	0.8718	1.0006
2	03	52	10	2.6430	2.7648

2	03	53	01	4.7168	4.8564
2	03	53	02	3.1286	3.2586
2	03	53	03	5.1663	5.2806
2	03	53	04	2.7528	2.8842
2	03	53	05	0.6304	0.7114
2	03	53	06	0.8408	0.9626
2	03	53	07	5.0904	5.2118
2	03	53	08	3.3792	3.4926
2	03	53	09	4.9636	5.0734
2	03	53	10	0.7072	0.8566

2	04	11	01	1.4214	2.3584	3.3396	4.2602	5.3032	6.2721
2	04	11	02	0.7552	1.6984	2.7186	3.6288	4.6538	5.5958
2	04	11	03	1.3960	2.3236	3.3012	4.1954	5.2286	6.2130
2	04	11	04	1.5458	2.4218	3.4098	4.3308	5.4228	6.3433
2	04	11	05	1.3240	2.2926	3.2639	4.2882	5.2661	6.1618
2	04	11	06	1.2508	2.2184	3.2661	4.1802	5.2158	6.1574
2	04	11	07	1.2244	2.2146	3.1740	4.1197	5.0992	6.1032
2	04	11	08	1.3266	2.1944	3.1596	4.2010	5.2008	6.1478
2	04	11	09	1.3376	2.2246	3.2678	4.2084	5.1578	6.1396
2	04	11	10	1.1958	2.1828	3.1110	4.0886	5.1854	6.1052
2	04	12	01	1.2956	2.2323	3.1745	4.2166	5.2624	6.3073
2	04	12	02	1.3464	2.2738	3.3112	4.2870	5.3008	6.3410
2	04	12	03	1.4161	2.3996	3.3976	4.3956	5.3666	6.3281
2	04	12	04	1.2970	2.1706	3.2163	4.2272	5.1297	6.2670
2	04	12	05	1.3356	2.2514	3.2208	4.3140	5.2489	6.2283
2	04	12	06	1.3380	2.2680	3.2852	4.3094	5.2930	6.3217
2	04	12	07	1.3000	2.2674	3.2400	4.1746	5.1780	6.1940
2	04	12	08	1.3146	2.2266	3.1070	4.1556	5.1686	6.0948
2	04	12	09	1.3854	2.3662	3.3182	4.2962	5.2422	6.3091
2	04	12	10	1.3396	2.3038	3.2970	4.2856	5.2710	6.3150
2	04	13	01	1.3430	2.2260	3.1926	4.1594	5.1350	6.1150
2	04	13	02	1.2312	2.2602	3.2842	4.2614	5.2314	6.2400
2	04	13	03	1.3700	2.2656	3.2712	4.2218	5.2284	6.2081
2	04	13	04	1.2586	2.1994	3.1980	4.1664	5.1438	6.1418
2	04	13	05	1.3532	2.1920	3.2370	4.1701	5.1570	6.0954
2	04	13	06	1.2904	2.2872	3.2534	4.1408	5.1268	6.0430
2	04	13	07	1.4052	2.2968	3.3520	4.2020	5.3174	6.1899
2	04	13	08	1.3912	2.2768	3.3087	4.2310	5.2812	6.1476
2	04	13	09	1.3873	2.3134	3.3584	4.2482	5.2803	6.1428
2	04	13	10	1.3184	2.1096	3.2100	4.0660	5.1170	6.0428
2	04	16	01	1.1506	2.0100	2.9642	3.9036	4.8446	5.8465
2	04	16	02	1.3474	2.3252	3.2976	4.2638	5.2452	6.1566
2	04	16	03	1.3336	2.2942	3.2714	4.2284	5.2150	6.1892
2	04	16	04	1.2194	2.1928	3.2434	4.1554	5.1887	6.1744
2	04	16	05	1.3112	2.2926	3.2770	4.2096	5.1640	6.1968
2	04	16	06	1.3482	2.2930	3.2050	4.2511	5.2184	6.3086
2	04	16	07	1.4648	2.3946	3.3882	4.3350	5.3152	6.2810
2	04	16	08	1.2914	2.1606	3.1780	4.0944	5.1280	6.1046
2	04	16	09	1.2332	2.2200	3.1392	4.1188	5.0968	6.0958
2	04	16	10	1.3552	2.2954	3.2422	4.2514	5.2382	6.1724

2	04	18	01	1.4348	2.1076	2.8643	3.5642	4.3330	5.0410
2	04	18	02	1.1170	1.8916	2.6170	3.3267	4.0674	4.8269
2	04	18	03	1.4537	2.2518	2.9174	3.6304	4.3880	5.1014
2	04	18	04	1.0864	1.8554	2.6086	3.3256	4.0801	4.8434
2	04	18	05	1.1415	1.9025	2.6560	3.3395	4.0423	4.7851
2	04	18	06	1.1260	1.8614	2.5802	3.2730	4.0558	4.8350
2	04	18	07	1.0762	1.8691	2.5856	3.3228	4.0590	4.8559
2	04	18	08	1.2140	1.9508	2.6725	3.4079	4.1366	4.9463
2	04	18	09	1.0247	1.8259	2.5094	3.2129	4.0449	4.7086
2	04	18	10	1.2646	2.0412	2.7845	3.4654	4.2595	4.9651

2	04	21	01	0.5862	1.0938	1.6332
2	04	21	02	3.0601	3.5221	3.9967
2	04	21	03	2.7828	3.2370	3.7188
2	04	21	04	0.9840	1.4448	1.9314
2	04	21	05	0.6916	1.1599	1.6548
2	04	21	06	2.9170	3.3897	3.9007
2	04	21	07	0.6408	1.0888	1.5802
2	04	21	08	0.7408	1.2004	1.6780
2	04	21	09	3.0296	3.5098	3.9921
2	04	21	10	0.8832	1.3254	1.7736

2	04	22	01	5.4112	5.7322	6.0867
2	04	22	02	0.6226	0.9131	1.2166
2	04	22	03	0.8318	1.1593	1.5238
2	04	22	04	3.2259	3.5479	3.8964
2	04	22	05	0.5584	0.9004	1.2400
2	04	22	06	2.7568	3.0923	3.4333
2	04	22	07	2.8347	3.1837	3.5592
2	04	22	08	0.6884	1.0089	1.3569
2	04	22	09	2.4991	2.8506	3.1496
2	04	22	10	2.9801	3.2891	3.6466

2	04	23	01	2.6135	3.0470	3.3060
2	04	23	02	4.6474	5.1389	5.4264
2	04	23	03	0.2863	0.8003	1.1224
2	04	23	04	0.6194	1.1138	1.4492
2	04	23	05	0.7163	1.2298	1.5263
2	04	23	06	2.9182	3.4276	3.7186
2	04	23	07	2.4866	2.9776	3.2801
2	04	23	08	0.7669	1.2804	1.5504
2	04	23	09	2.9087	3.3827	3.6747
2	04	23	10	2.6236	3.0809	3.3834

2	04	24	01	0.8798	1.1778	1.6793
2	04	24	02	3.1190	3.4225	3.8705
2	04	24	03	2.5010	2.7975	3.2610
2	04	24	04	2.8722	3.1602	3.6177
2	04	24	05	0.6615	0.9510	1.4460
2	04	24	06	2.9217	3.2047	3.6747
2	04	24	07	0.6630	0.9618	1.4550
2	04	24	08	0.6894	0.9729	1.4229
2	04	24	09	2.9111	3.1916	3.6436
2	04	24	10	0.5925	0.8800	1.3805

2	04	25	01	0.9370	1.5364	1.8076
2	04	25	02	3.8838	4.3182	4.6338
2	04	25	03	0.4056	0.9180	1.3350
2	04	25	04	0.8561	1.4826	1.8739
2	04	25	05	2.8276	3.2476	3.6046
2	04	25	06	3.6504	4.0350	4.3860
2	04	25	07	2.4488	2.8676	3.3062
2	04	25	08	0.5300	0.9212	1.3802
2	04	25	09	1.0964	1.5703	1.9952

2	04	26	01	3.5040	3.8276	4.1112
2	04	26	02	3.6470	3.9498	4.1974
2	04	26	03	0.4641	0.7751	1.0561
2	04	26	04	3.1979	3.4999	3.7544
2	04	26	05	0.4147	0.6992	0.9887
2	04	26	06	0.6910	1.0030	1.2840
2	04	26	07	3.5541	3.8226	4.0676
2	04	26	08	2.8806	3.1650	3.3974

2	04	27	01	0.6774	1.1826	1.4874
2	04	27	02	0.6104	1.0670	1.3226
2	04	27	03	2.9356	3.4162	3.6706
2	04	27	04	4.1076	4.7712	5.0448
2	04	27	05	0.4554	0.9276	1.1970
2	04	27	06	0.7942	1.2970	1.5646
2	04	27	07	0.9416	1.6059	1.9020
2	04	27	08	3.1432	3.7744	4.0516
2	04	27	09	4.0162	4.4782	4.7392
2	04	27	10	3.9574	4.5712	4.8136

2	04	28	01	1.0792	1.4722	1.8266
2	04	28	02	3.4473	3.8876	4.3167
2	04	28	03	0.7364	1.1277	1.5323
2	04	28	04	3.0166	3.3868	3.7684
2	04	28	05	0.9423	1.3053	1.7078
2	04	28	06	3.3816	3.7332	4.1094
2	04	28	07	4.0493	4.4833	5.0839
2	04	28	08	3.3501	3.7346	4.1331
2	04	28	09	4.6114	5.0079	5.3594
2	04	28	10	1.1496	1.5276	1.8971
2	04	31	01	0.3079	1.8056	1.7478
2	04	31	02	3.8147	4.6302	5.3645
2	04	31	03	1.0920	1.9173	2.6614
2	04	31	04	4.8375	5.6222	6.3432
2	04	31	05	1.3990	2.2670	3.0398
2	04	31	06	1.1704	2.0832	2.8488
2	04	31	07	1.4077	2.3030	3.0506
2	04	31	08	0.7946	1.6241	2.3409
2	04	31	09	4.5292	5.3812	6.1716
2	04	31	10	1.2660	2.1548	2.9580
2	04	32	01	0.4021	1.1049	2.0611
2	04	32	02	3.2388	3.9465	5.0285
2	04	32	03	1.0524	1.7496	2.6666
2	04	32	04	4.1948	4.9039	5.8055
2	04	32	05	1.0684	1.7884	2.7556
2	04	32	06	0.9603	1.6610	2.5752
2	04	32	07	4.2994	4.9497	5.8317
2	04	32	08	0.4695	1.1891	2.1005
2	04	32	09	3.7696	4.4257	5.3917
2	04	32	10	1.2090	1.8906	2.7594
2	04	33	01	0.5694	1.5707	2.1875
2	04	33	02	4.1064	5.1344	5.7992
2	04	33	03	1.0683	2.0700	2.7161
2	04	33	04	0.7968	1.7958	2.4774
2	04	33	05	0.6502	1.6414	2.3366
2	04	33	06	3.8746	4.8742	5.5105
2	04	33	07	1.3759	2.3356	2.9942
2	04	33	08	0.4808	1.3901	1.9746
2	04	33	09	4.4061	5.3903	6.0182
2	04	33	10	0.8403	1.8301	2.5070

2	04	34	01	0.3860	1.2966	2.1606
2	04	34	02	3.9434	4.8546	5.7266
2	04	34	03	0.8806	1.8715	2.7976
2	04	34	04	0.8430	1.8150	2.7915
2	04	34	05	0.4736	1.4537	2.4446
2	04	34	06	0.9898	1.9726	2.9167
2	04	34	07	2.4832	3.4300	4.3534
2	04	34	08	0.5304	1.4392	2.3800
2	04	34	09	4.3055	5.2451	6.1514
2	04	34	10	0.4792	1.4224	2.3248
2	04	35	01	0.6324	1.4820	2.3356
2	04	35	02	3.9378	4.8498	5.7562
2	04	35	03	0.6090	1.5814	2.5422
2	04	35	04	4.2554	5.1538	6.1170
2	04	35	05	0.8832	1.8772	2.7960
2	04	35	06	0.4056	1.3656	2.3152
2	04	35	07	3.8968	4.8544	5.7928
2	04	35	08	0.6526	1.5510	2.4566
2	04	35	09	4.1126	5.0406	5.9614
2	04	35	10	0.4932	1.4540	2.3356
2	04	36	01	0.3720	1.2785	2.0716
2	04	36	02	1.2948	2.1908	3.0292
2	04	36	03	0.5444	0.5204	2.3852
2	04	36	04	4.4564	5.3564	6.2148
2	04	36	05	1.0956	2.0076	2.8828
2	04	36	06	0.3553	1.2905	1.9534
2	04	36	07	0.6226	1.5498	2.4370
2	04	36	08	1.4210	2.3250	3.2034
2	04	36	09	1.4602	2.4202	3.3378
2	04	36	10	1.5188	2.4420	3.2844
2	04	41	01	0.7380	1.0872	
2	04	41	02	3.1087	3.4510	
2	04	41	03	1.0365	1.3584	
2	04	41	04	1.3496	1.7428	
2	04	41	05	3.5262	3.9254	
2	04	41	06	3.3890	3.7270	
2	04	41	07	0.4514	0.7538	
2	04	41	08	0.7672	1.0944	
2	04	41	09	0.5871	0.9432	
2	04	41	10	3.2944	3.5920	

2	04	42	01	1.2787	1.5997
2	04	42	02	3.5269	3.8188
2	04	42	03	3.4282	3.7654
2	04	42	04	1.1848	1.5132
2	04	42	05	3.7649	4.1270
2	04	42	06	0.9274	1.2484
2	04	42	07	0.8895	1.2156
2	04	42	08	2.6173	2.9263
2	04	42	09	3.0430	3.3556
2	04	42	10	0.6820	1.0175
2	04	43	01	1.5989	1.8665
2	04	43	02	3.8727	4.1499
2	04	43	03	0.8247	1.1136
2	04	43	04	3.7802	4.0706
2	04	43	05	0.7712	1.0664
2	04	43	06	2.8476	3.1140
2	04	43	07	0.9306	1.1883
2	04	43	08	2.7928	3.1392
2	04	43	09	2.5017	2.8035
2	04	43	10	2.6816	2.9762
2	04	44	01	0.9023	1.0106
2	04	44	02	5.1308	5.2664
2	04	44	03	3.3542	3.4904
2	04	44	04	2.5927	2.7442
2	04	44	05	5.3839	5.5297
2	04	44	06	2.9674	3.1120
2	04	44	07	0.9190	1.0579
2	04	44	08	0.5213	0.6965
2	04	44	09	0.7504	0.9034
2	04	44	10	1.0882	1.2133
2	04	45	01	1.2606	1.3824
2	04	45	02	2.7274	2.8604
2	04	45	03	0.8618	0.9788
2	04	45	04	1.1099	1.2230
2	04	45	05	4.5418	4.6627
2	04	45	06	4.9628	5.1168
2	04	45	07	5.3404	5.5078
2	04	45	08	2.6747	2.8085
2	04	45	09	5.2813	5.4067
2	04	45	10	2.9410	3.0754

2	04	46	01	3.2266	3.3241
2	04	46	02	4.7056	4.8028
2	04	46	03	2.9834	3.0920
2	04	46	04	5.4869	5.5745
2	04	46	05	0.5023	0.5860
2	04	46	06	0.9419	1.0412
2	04	46	07	0.6993	0.8103
2	04	46	08	2.8286	2.9528
2	04	46	09	4.8279	4.9440
2	04	46	10	2.9730	3.0798
2	04	47	01	1.0324	1.4376
2	04	47	02	2.0072	2.3560
2	04	47	03	4.0144	4.3700
2	04	47	04	4.5760	5.0044
2	04	47	05	3.9401	4.3296
2	04	47	06	1.0645	1.4730
2	04	47	07	3.3198	3.7082
2	04	47	08	4.1526	4.5578
2	04	47	09	3.8138	4.2114
2	04	47	10	5.4888	5.8748
2	04	48	01	3.8645	4.0493
2	04	48	02	3.4276	3.6649
2	04	48	03	4.2258	4.4690
2	04	48	04	1.1876	1.4192
2	04	48	05	1.2177	1.4580
2	04	48	06	3.5200	3.7324
2	04	48	07	0.7969	0.9934
2	04	48	08	1.1759	1.3855
2	04	48	09	3.4145	3.6421
2	04	48	10	4.3574	4.5938
2	04	49	01	0.9354	1.1346
2	04	49	02	0.7143	0.8937
2	04	49	03	0.8314	1.0621
2	04	49	04	4.0030	4.2499
2	04	49	05	4.3076	4.5026
2	04	49	06	0.8140	1.0044
2	04	49	07	3.7508	3.9772
2	04	49	08	3.7300	3.9337
2	04	49	09	1.1976	1.4031
2	04	49	10	1.4748	1.7068

2	04	50	01	1.2732	1.4607
2	04	50	02	4.5935	4.8020
2	04	50	03	4.4229	4.6389
2	04	50	04	1.2152	1.4428
2	04	50	05	1.0820	1.3028
2	04	50	06	0.8624	1.0752
2	04	50	07	1.1920	1.4112
2	04	50	08	0.8494	1.0402
2	04	50	09	0.6581	0.8747
2	04	50	10	1.9915	2.1991

2	04	51	01	0.8020	0.9832
2	04	51	02	4.3925	4.5584
2	04	51	03	0.8572	1.0476
2	04	51	04	1.5044	1.6896
2	04	51	05	1.4530	1.6340
2	04	51	06	1.1540	1.3288
2	04	51	07	0.6676	0.8790
2	04	51	08	3.0550	3.2964
2	04	51	09	0.8567	1.0742
2	04	51	10	1.0185	1.2003

2	04	52	01	4.2434	4.3769
2	04	52	02	1.2152	1.3412
2	04	52	03	1.1752	1.3123
2	04	52	04	3.7892	3.9364
2	04	52	05	3.3864	3.5052
2	04	52	06	1.0216	1.1574
2	04	52	07	3.3482	3.4856
2	04	52	08	3.2984	3.4362
2	04	52	09	3.4864	3.6169
2	04	52	10	0.9162	1.0629

2	04	53	01	1.3734	1.5158
2	04	53	02	4.0594	4.1665
2	04	53	03	3.5740	3.7026
2	04	53	04	3.8634	4.0029
2	04	53	05	0.7750	0.8986
2	04	53	06	3.7448	3.8711
2	04	53	07	3.2914	3.4188
2	04	53	08	0.6958	0.8300
2	04	53	09	0.9526	1.0784
2	04	53	10	3.7859	3.9326

2	05	11	01	1.2506	2.1658	3.1086	4.1130	5.0862	6.0700
2	05	11	02	1.2920	2.2566	3.2108	4.1982	5.1462	6.0446
2	05	11	03	1.3478	2.2412	3.1768	4.1388	5.0733	6.0295
2	05	11	04	1.2672	2.2574	3.2570	4.2326	5.2114	6.1912
2	05	11	05	1.4384	2.3984	3.3850	4.3734	5.3934	6.3154
2	05	11	06	1.3098	2.2530	3.2558	4.2152	5.1550	6.1430
2	05	11	07	1.3840	2.3436	3.3272	4.2958	5.3534	6.2812
2	05	11	08	1.2292	2.1704	3.2086	4.1790	5.1266	6.0746
2	05	11	09	1.3272	2.2274	3.2338	4.2102	5.1946	6.1474
2	05	12	01	1.2388	2.1398	3.1018	4.0890	5.0692	6.0798
2	05	12	02	0.4780	1.4676	2.4856	3.4818	4.4902	5.4840
2	05	12	03	0.5120	1.5310	2.4868	3.4536	4.3830	5.3330
2	05	12	04	5.7396	1.9718	2.9262	3.8804	4.8224	5.7396
2	05	12	05	0.5468	1.5094	2.4792	3.4682	4.4492	5.3932
2	05	12	06	0.9332	1.8104	2.7114	3.7012	4.6328	5.5038
2	05	12	07	0.4796	1.3420	2.3142	3.2284	4.4054	5.4152
2	05	12	08	0.5824	1.4890	2.4468	3.3640	4.2836	5.1362
2	05	12	09	0.5876	1.4846	2.4980	3.5044	4.5200	5.5076
2	05	12	10	0.6052	1.5324	2.5178	3.5276	4.5112	5.4840
2	05	13	01	0.9278	1.9346	2.9435	3.9224	4.9274	5.8872
2	05	13	02	1.3868	2.3638	3.3526	4.3314	5.0384	6.2246
2	05	13	03	1.3990	2.3580	3.3794	4.3544	5.3034	6.2747
2	05	13	04	1.3286	2.2862	3.2890	4.2590	5.2742	6.2140
2	05	13	05	1.3726	2.3152	3.3280	4.2868	5.2944	6.2510
2	05	13	06	1.5178	2.4424	3.4496	4.3744	5.3220	6.3092
2	05	13	07	1.3096	2.2492	3.2698	4.2652	5.2474	6.1838
2	05	13	08	0.5052	1.5172	2.5710	3.5232	4.0572	5.4574
2	05	13	09	1.3400	2.3188	3.3638	4.3466	5.3368	6.3420
2	05	13	10	1.3410	2.3632	3.3676	4.3478	5.3484	6.3068
2	05	16	01	0.3746	1.3007	2.2460	3.1870	4.1355	5.0324
2	05	16	02	1.3786	2.3142	3.2984	4.2418	5.2220	6.1482
2	05	16	03	1.2596	2.2050	3.1710	4.1272	5.0711	5.9948
2	05	16	04	1.3334	2.2388	3.2100	4.1458	5.0822	6.0262
2	05	16	05	1.3302	2.2656	3.2264	4.1838	5.1424	6.0884
2	05	16	06	1.2962	2.2339	3.2278	4.2514	5.1990	6.1202
2	05	16	07	1.4142	2.3506	3.3134	4.3616	5.2898	6.2110
2	05	16	08	1.4372	2.3242	3.3325	4.3078	5.2524	6.2062
2	05	16	09	1.3174	2.2072	3.2065	4.1742	5.1054	6.0326
2	05	16	10	1.3436	2.2384	3.2384	4.1810	5.1630	6.0262

2	05	18	01	1.0838	1.9038	2.6296	3.3686	4.1132	4.8802
2	05	18	02	1.7078	2.4733	3.2514	3.9664	4.7250	5.4428
2	05	18	03	1.1912	1.9946	2.7972	3.5498	4.3016	5.0426
2	05	18	04	1.1466	1.9040	2.6780	3.3908	4.1300	4.8696
2	05	18	05	1.2150	1.9770	2.7300	3.4730	4.2012	4.9155
2	05	18	06	0.7612	1.5278	2.3178	3.0574	3.8380	4.5662
2	05	18	07	1.6796	2.3860	3.1365	3.8686	4.6026	5.3478
2	05	18	08	2.3026	3.0503	3.8146	4.5548	5.2714	5.9824
2	05	18	09	1.4420	2.1572	2.8868	3.6006	4.2881	4.9699
2	05	18	10	1.4824	2.2776	3.0110	3.2791	4.4534	5.2210

2	05	21	01	0.4110	0.8832	1.3788
2	05	21	02	2.8764	3.3960	3.8976
2	05	21	03	0.3880	0.8920	1.4128
2	05	21	04	2.8324	3.3094	3.8056
2	05	21	05	2.4078	2.8908	3.3606
2	05	21	06	3.1930	3.6688	4.1644
2	05	21	07	0.4230	0.9018	1.4160
2	05	21	08	4.7772	5.2668	5.7660
2	05	21	09	0.6762	1.1784	1.6758
2	05	21	10	5.3174	5.7764	6.2810

2	05	22	01	5.3006	5.5974	5.9082
2	05	22	02	0.6154	0.9330	1.2402
2	05	22	03	3.3777	3.7357	4.0712
2	05	22	04	5.0495	5.3784	5.6914
2	05	22	05	0.4946	0.8386	1.1666
2	05	22	06	0.5556	0.8856	1.1991
2	05	22	07	2.8230	3.1426	3.4702
2	05	22	08	3.1174	3.4410	3.7774
2	05	22	09	5.0332	5.3588	5.7084
2	05	22	10	0.5815	0.9095	1.2695

2	05	23	01	2.5806	2.9862	3.2262
2	05	23	02	4.5790	5.0295	5.2765
2	05	23	03	5.1648	5.6380	5.9229
2	05	23	04	2.9808	3.5898	3.8644
2	05	23	05	0.5500	0.9810	1.2300
2	05	23	06	2.5150	3.0155	3.2975
2	05	23	07	0.5885	1.0640	1.3340
2	05	23	08	2.7549	3.2439	3.5384
2	05	23	09	3.1938	3.7110	3.9906
2	05	23	10	5.3898	5.9238	6.2292

2	05	24	01	0.7610	0.9914	1.4462
2	05	24	02	2.9901	3.2311	3.6821
2	05	24	03	0.5678	0.8396	1.4306
2	05	24	04	3.1729	3.6314	3.8949
2	05	24	05	1.0675	1.3235	1.7868
2	05	24	06	4.7837	5.0637	5.5537
2	05	24	07	0.6979	0.9754	1.4719
2	05	24	08	1.0487	1.3197	1.8127
2	05	24	09	5.2153	5.4817	5.9798
2	05	24	10	0.7951	1.0728	1.5923
2	05	25	01	1.0809	1.4839	1.8249
2	05	25	02	2.5450	2.9605	3.3230
2	05	25	03	3.4027	3.7862	4.1397
2	05	25	04	1.1705	1.5775	1.9195
2	05	25	05	1.0791	1.4456	1.7941
2	05	25	06	1.1824	1.5684	1.9104
2	05	25	07	0.6078	1.2098	1.3978
2	05	25	08	3.7417	4.1189	4.4937
2	05	25	09	3.5506	3.9934	4.4050
2	05	25	10	0.8346	1.2230	1.4970
2	05	26	01	3.2666	3.6329	3.8936
2	05	26	02	3.3524	3.6568	3.9156
2	05	26	03	0.9382	1.3020	1.5500
2	05	26	04	3.2798	3.5762	3.8494
2	05	26	05	0.6259	0.9266	1.1866
2	05	26	06	3.4684	3.8004	4.0864
2	05	26	07	3.6258	3.9969	4.2897
2	05	26	08	0.6098	0.9479	1.2425
2	05	27	01	1.0207	1.3751	1.6467
2	05	27	02	4.2068	4.5963	4.8828
2	05	27	03	0.9189	1.2873	1.5673
2	05	27	04	4.3328	4.7223	5.0078
2	05	27	05	1.1012	1.4736	1.7520
2	05	27	06	1.0396	1.4368	1.7460
2	05	27	07	1.1684	1.5528	1.8520
2	05	27	08	3.1244	3.5004	3.7776
2	05	27	09	0.8346	1.2230	1.4970
2	05	27	10	1.0484	1.4436	1.7440

2	05	28	01	3.9817	4.3629	4.6629
2	05	28	02	1.5177	1.9132	2.2387
2	05	28	03	0.9537	1.3567	1.6712
2	05	28	04	3.5907	3.9924	4.3177
2	05	28	05	3.5706	4.0056	4.3716
2	05	28	06	3.4721	3.9037	4.2341
2	05	28	07	1.1680	1.5876	1.9232
2	05	28	08	1.0614	1.4738	1.7938
2	05	28	09	2.8872	3.3008	3.6512
2	05	28	10	3.8798	4.2586	4.5986
2	05	31	01	0.9107	1.7108	2.4191
2	05	31	02	0.4480	1.3110	2.0820
2	05	31	03	0.6253	1.4443	2.1499
2	05	31	04	0.5106	1.2882	1.9767
2	05	31	05	0.4668	1.2588	1.9914
2	05	31	06	0.9438	1.7367	2.5107
2	05	31	07	0.7015	1.5043	2.2603
2	05	31	08	0.6025	1.4485	2.2595
2	05	31	09	0.9123	1.6611	2.4630
2	05	31	10	0.7104	1.5674	2.3834
2	05	32	01	0.4928	1.2264	2.2056
2	05	32	02	0.5512	1.3376	2.3376
2	05	32	03	1.1776	1.9944	2.9784
2	05	32	04	0.8104	1.6136	2.5904
2	05	32	05	0.7634	1.5642	2.5234
2	05	32	06	0.7766	1.5614	2.4862
2	05	32	07	1.0842	1.9018	2.8210
2	05	32	08	0.8540	1.6756	2.6140
2	05	32	09	0.4075	1.2265	2.2021
2	05	32	10	1.2986	2.0802	3.0538
2	05	33	01	0.3573	1.3828	2.0319
2	05	33	02	0.8096	1.8208	2.5334
2	05	33	03	1.4566	2.5646	3.2033
2	05	33	04	0.1447	1.1691	1.8286
2	05	33	05	0.8714	1.9602	2.6424
2	05	33	06	0.7188	1.7940	2.4422
2	05	33	07	0.7348	1.9004	2.5508
2	05	33	08	1.7237	2.8853	3.4954
2	05	33	09	0.7238	1.8278	2.4206
2	05	33	10	1.3382	2.3425	2.9167

2	05	34	01	0.7734	1.7502	2.7842
2	05	34	02	0.4248	1.4288	2.5332
2	05	34	03	0.5202	1.5438	2.5866
2	05	34	04	0.8040	1.7856	2.8392
2	05	34	05	0.5415	1.6191	2.6367
2	05	34	06	0.4527	1.4218	2.4206
2	05	34	07	0.3767	1.4075	2.4539
2	05	34	08	0.7410	1.7466	2.7954
2	05	34	09	0.8118	1.8198	2.8818
2	05	34	10	0.7138	1.7390	2.8426
2	05	35	01	0.9420	1.8582	2.8253
2	05	35	02	0.8650	1.8346	2.8078
2	05	35	03	0.6468	1.6200	2.6064
2	05	35	04	0.6252	1.6116	2.6280
2	05	35	05	1.0012	1.9528	2.9092
2	05	35	06	0.7654	1.7626	2.7382
2	05	35	07	0.8443	1.7991	2.7517
2	05	35	08	0.6478	1.6498	2.6410
2	05	35	09	0.9936	2.0160	3.0096
2	05	35	10	1.3384	2.2864	3.2104
2	05	36	01	0.5662	1.4405	2.2421
2	05	36	02	1.0988	2.0092	2.8504
2	05	36	03	0.8932	1.8084	2.6684
2	05	36	04	0.8668	1.7820	2.6084
2	05	36	05	0.7971	1.7155	2.5611
2	05	36	06	0.6996	1.6084	2.4036
2	05	36	07	0.3871	1.3135	2.1703
2	05	36	08	0.7810	1.7162	2.6042
2	05	36	09	0.6262	1.5334	2.3654
2	05	36	10	0.6561	1.5593	2.4121
2	05	41	01	2.7581	3.0593	
2	05	41	02	0.8838	1.2046	
2	05	41	03	0.7544	1.0766	
2	05	41	04	0.7787	1.1042	
2	05	41	05	3.3364	3.6613	
2	05	41	06	5.7430	6.0742	
2	05	41	07	2.9561	3.2516	
2	05	41	08	0.8154	1.1415	
2	05	41	09	3.4918	3.8005	
2	05	41	10	0.9785	1.2740	

2	05	42	01	4.8029	5.0699
2	05	42	02	5.3841	5.6793
2	05	42	03	3.0928	3.3940
2	05	42	04	5.4415	5.7565
2	05	42	05	5.5609	5.8840
2	05	42	06	0.9195	1.2345
2	05	42	07	0.7670	1.0694
2	05	42	08	3.0537	3.3471
2	05	42	09	5.4598	5.7826
2	05	42	10	3.0517	3.3550
2	05	43	01	0.5756	0.8501
2	05	43	02	3.0166	3.2929
2	05	43	03	5.2580	5.5715
2	05	43	04	3.1301	3.4070
2	05	43	05	0.9952	1.2828
2	05	43	06	3.5797	3.8731
2	05	43	07	4.8302	5.1326
2	05	43	08	4.7717	5.0669
2	05	43	09	0.9258	1.1781
2	05	43	10	5.0269	5.3041
2	05	44	01	0.9370	1.0812
2	05	44	02	3.3990	3.5403
2	05	44	03	1.2249	1.3812
2	05	44	04	1.0234	1.1755
2	05	44	05	5.6171	5.7716
2	05	44	06	3.2650	3.4375
2	05	44	07	0.8249	1.0115
2	05	44	08	3.4540	3.6109
2	05	44	09	5.6863	5.8171
2	05	44	10	0.9095	1.0685
2	05	45	01	5.1323	5.2847
2	05	45	02	5.4456	5.5854
2	05	45	03	1.6591	1.7995
2	05	45	04	3.1693	3.3097
2	05	45	05	3.5341	3.6856
2	05	45	06	0.9131	1.0559
2	05	45	07	5.3216	5.4788
2	05	45	08	5.4393	5.5983
2	05	45	09	1.0170	1.1646
2	05	45	10	3.1165	3.2644

2	05	46	01	2.7481	2.8954
2	05	46	02	0.9555	1.0935
2	05	46	03	3.8861	4.0349
2	05	46	04	5.5133	5.6627
2	05	46	05	0.9699	1.1103
2	05	46	06	5.2933	5.4388
2	05	46	07	2.8574	2.9956
2	05	46	08	1.1748	1.3136
2	05	46	09	3.2629	3.3937
2	05	46	10	5.4576	5.5974
2	05	47	01	1.4198	1.7174
2	05	47	02	5.9298	6.2520
2	05	47	03	3.8354	4.1489
2	05	47	04	3.8385	4.1664
2	05	47	05	5.7304	6.1400
2	05	47	06	1.0024	1.4568
2	05	47	07	3.1734	3.6150
2	05	47	08	0.8614	1.2834
2	05	47	09	3.5735	3.9902
2	05	47	10	0.7318	1.1137
2	05	48	01	3.0666	3.2694
2	05	48	02	0.9467	1.1519
2	05	48	03	1.1150	1.3199
2	05	48	04	3.5919	3.8139
2	05	48	05	0.6456	0.8640
2	05	48	06	3.6310	3.8530
2	05	48	07	1.0124	1.2194
2	05	48	08	3.3945	3.6288
2	05	48	09	0.7060	0.9589
2	05	48	10	3.6768	3.8769
2	05	49	01	0.4499	0.6458
2	05	49	02	3.4932	3.6954
2	05	49	03	6.1710	6.3699
2	05	49	04	3.5919	3.8139
2	05	49	05	3.2742	3.4926
2	05	49	06	3.9730	4.1838
2	05	49	07	5.4494	5.6828
2	05	49	08	0.6045	0.8205
2	05	49	09	3.9487	4.1479
2	05	49	10	0.8994	1.1124

2	05	50	01	1.1498	1.3325
2	05	50	02	4.5615	4.7622
2	05	50	03	0.9283	1.1137
2	05	50	04	0.9571	1.1647
2	05	50	05	0.8258	1.0502
2	05	50	06	0.6943	0.8848
2	05	50	07	0.7660	1.0063
2	05	50	08	3.5694	3.7894
2	05	50	09	3.2937	3.4992
2	05	50	10	0.7846	0.9928

2	05	51	01	0.8553	1.0209
2	05	51	02	0.8535	1.0248
2	05	51	03	5.0147	5.2163
2	05	51	04	5.4448	5.7214
2	05	51	05	5.6110	5.8108
2	05	51	06	0.5740	0.7519
2	05	51	07	3.5988	3.8004
2	05	51	08	0.9069	1.0941
2	05	51	09	3.3961	3.5674
2	05	51	10	2.6008	2.7703

2	05	52	01	2.6844	2.8298
2	05	52	02	4.6991	4.8368
2	05	52	03	0.9522	1.1152
2	05	52	04	3.2426	3.4028
2	05	52	05	4.9146	5.0781
2	05	52	06	0.6560	0.8244
2	05	52	07	6.0379	6.2083
2	05	52	08	3.0870	3.2529
2	05	52	09	1.2273	1.4055
2	05	52	10	4.6347	4.7745

2	05	53	01	4.6537	4.7983
2	05	53	02	2.7543	2.9067
2	05	53	03	2.9790	3.1514
2	05	53	04	1.0162	1.1932
2	05	53	05	2.7294	2.8804
2	05	53	06	3.0319	3.2020
2	05	53	07	1.1189	1.2722
2	05	53	08	5.9970	6.1620
2	05	53	09	5.6146	5.7742
2	05	53	10	0.6317	0.8030

2	06	11	01	1.2240	2.2455	3.1859	4.1809	5.1431	6.1736
2	06	11	02	1.2352	2.1797	3.1980	4.1615	5.1121	6.0621
2	06	11	03	1.2822	2.2298	3.1769	4.2264	5.2097	6.2207
2	06	11	04	1.2282	2.1997	3.1674	4.1429	5.1566	6.1761
2	06	11	05	1.2498	2.1843	3.0708	4.0063	4.9961	5.9816
2	06	11	06	1.1804	2.1150	3.1043	4.1143	5.0651	6.1086
2	06	11	07	1.2681	2.2271	3.3080	4.1976	5.2217	6.2772
2	06	11	08	1.2917	2.2807	3.2925	4.3145	5.3002	6.3317
2	06	11	09	1.2162	2.1562	3.1734	4.1334	5.1701	6.2286
2	06	12	01	1.1035	2.0845	3.1154	4.1319	5.1365	6.1210
2	06	12	02	1.1930	2.1990	3.2385	4.2265	5.2452	6.2442
2	06	12	03	1.2827	2.2674	3.3370	4.2450	5.3467	6.2327
2	06	12	04	1.1822	2.2227	3.2395	4.2595	5.1721	6.0891
2	06	12	05	1.1175	2.1000	3.1434	4.0884	5.1661	6.1476
2	06	12	06	1.2720	2.2855	3.2735	4.2935	5.3232	6.2552
2	06	12	07	1.2179	2.2719	3.2650	4.2285	5.2542	6.1877
2	06	12	08	1.1336	2.2321	3.1759	4.2394	5.1967	6.1792
2	06	12	09	1.2382	2.1907	3.3180	4.3690	5.3843	6.3626
2	06	12	10	1.2811	2.2231	3.1589	4.1759	5.1691	6.1881
2	06	13	01	1.0934	2.1359	3.1479	4.0989	5.1201	6.1196
2	06	13	02	1.1974	2.1434	3.1459	4.1704	5.1862	6.1572
2	06	13	03	1.2121	2.1306	3.1609	4.1469	5.1171	6.1781
2	06	13	04	1.2071	2.2666	3.2291	4.2246	5.2382	6.2097
2	06	13	05	1.1510	2.0960	3.0693	4.0133	5.0836	6.0461
2	06	13	06	1.0441	2.0486	3.0098	4.0318	5.0066	5.9376
2	06	13	07	1.1689	2.1574	3.0824	3.9788	5.0746	6.0066
2	06	13	08	1.1337	2.0932	3.1073	4.0953	5.0841	6.0946
2	06	13	09	1.1837	2.2017	3.1344	4.1624	5.1776	6.0860
2	06	13	10	1.1684	2.0556	3.2093	4.0018	5.0416	6.0201
2	06	16	01	1.2262	2.1827	3.1849	4.2049	5.1651	6.1826
2	06	16	02	1.2908	2.2061	3.1612	4.1237	5.1036	6.0339
2	06	16	03	1.1489	2.0824	3.1699	4.1194	5.0691	6.1021
2	06	16	04	0.9414	2.0354	2.9276	3.9481	4.8780	5.8620
2	06	16	05	1.1930	2.0930	3.1314	4.1224	5.1031	6.0581
2	06	16	06	1.2161	2.1826	3.1519	4.1384	5.1081	6.0546
2	06	16	07	1.1891	2.2556	3.1664	4.1734	5.0916	6.0391
2	06	16	08	1.2790	2.2174	3.2065	4.2275	5.1734	6.2609
2	06	16	09	1.1625	2.1065	3.1444	4.1494	5.0692	6.2188
2	06	16	10	1.1426	2.0654	3.0813	4.1478	5.1601	6.0831

2	06	18	01	0.3185	1.0481	1.8288	2.5532	3.3088	4.0040
2	06	18	02	1.4738	2.1986	2.9676	3.7492	4.4280	5.1832
2	06	18	03	0.4112	1.1152	1.9100	2.6456	3.3634	4.0994
2	06	18	04	1.0492	1.7836	2.5470	3.2622	4.0482	4.7962
2	06	18	05	1.1292	1.9072	2.6282	6.4006	4.1128	4.8576
2	06	18	06	1.3400	2.0728	2.7904	3.5388	4.2528	5.0428
2	06	18	07	1.2334	1.9598	2.7298	3.4494	4.2148	4.9420
2	06	18	08	1.0358	1.7826	2.5442	3.2822	4.0512	4.8007
2	06	18	09	0.3414	1.1138	1.9000	2.6488	3.3368	4.0796
2	06	18	10	1.1514	1.9206	2.6776	3.4244	4.1752	4.9004

2	06	21	01	2.8492	3.3592	3.8760
2	06	21	02	0.5964	1.1368	1.6660
2	06	21	03	3.2060	3.7800	4.2980
2	06	21	04	0.9622	1.5232	2.0502
2	06	21	05	3.7332	4.2670	4.7804
2	06	21	06	0.2380	0.7548	1.2580
2	06	21	07	3.4133	3.9585	4.4747
2	06	21	08	1.0540	1.5844	2.0570
2	06	21	09	0.5304	1.0540	1.5504
2	06	21	10	3.2683	3.7961	4.3210

2	06	22	01	5.3916	5.7606	6.0986
2	06	22	02	0.4012	0.7480	1.1118
2	06	22	03	0.7990	1.1390	1.5062
2	06	22	04	5.2598	5.6100	6.0010
2	06	22	05	0.4114	0.7616	1.1322
2	06	22	06	2.5636	2.9002	3.2266
2	06	22	07	2.8764	3.2266	3.5564
2	06	22	08	5.1510	5.5080	5.8548
2	06	22	09	3.3082	3.6380	3.9780
2	06	22	10	5.3244	5.6780	6.0112

2	06	23	01	0.5706	1.2036	1.5384
2	06	23	02	3.0192	3.6606	3.9858
2	06	23	03	2.5500	3.1280	3.4442
2	06	23	04	2.8832	3.5088	3.8148
2	06	23	05	5.0864	5.6338	5.9466
2	06	23	06	0.7344	1.2954	1.6184
2	06	23	07	0.7774	1.2870	1.5938
2	06	23	08	3.1564	3.6452	3.9494
2	06	23	09	2.8662	3.4272	3.7468
2	06	23	10	0.9541	1.4558	1.7835

2	06	24	01	5.1204	5.4128	6.0282
2	06	24	02	1.2784	1.5844	2.2032
2	06	24	03	3.5972	3.8964	4.4948
2	06	24	04	0.4420	0.7412	1.3260
2	06	24	05	2.6962	2.9954	3.5394
2	06	24	06	4.6682	4.9572	5.5114
2	06	24	07	5.0592	5.3346	5.9228
2	06	24	08	0.8262	1.1084	1.6660
2	06	24	09	2.9410	3.2402	3.7910
2	06	24	10	0.9599	1.2760	1.8473
2	06	25	01	3.4530	3.8460	4.1640
2	06	25	02	3.1248	3.4660	3.7408
2	06	25	03	3.5278	4.0052	4.4113
2	06	25	04	0.9568	1.3440	1.6896
2	06	25	05	1.0701	1.5283	1.8618
2	06	25	06	0.9744	1.3300	1.6716
2	06	25	07	0.9350	1.3566	1.7306
2	06	25	08	3.5430	4.0080	4.3980
2	06	25	09	3.3959	3.7555	4.0948
2	06	25	10	4.0425	4.5243	4.9170
2	06	26	01	2.6418	2.8458	3.1076
2	06	26	02	0.7514	0.9928	1.2852
2	06	26	03	3.5496	3.8715	4.1992
2	06	26	04	0.5852	0.8634	1.1220
2	06	26	05	0.5049	0.7755	1.0392
2	06	26	06	0.9114	1.1813	1.4183
2	06	26	07	3.6743	3.9520	4.2304
2	06	26	08	3.6288	3.8482	4.1048
2	06	26	09	0.5829	0.8464	1.0930
2	06	26	10	0.9660	1.2524	1.5376
2	06	27	01	3.4510	3.9937	4.2432
2	06	27	02	0.5130	1.1340	1.4640
2	06	27	03	3.6992	4.1820	4.4676
2	06	27	04	3.0348	3.6585	3.9852
2	06	27	05	3.7408	4.2912	4.6080
2	06	27	06	0.9019	1.4268	1.7313
2	06	27	07	1.0098	1.5062	1.8156
2	06	27	08	1.0052	1.6044	1.9376
2	06	27	09	4.6240	5.1442	5.4264
2	06	27	10	3.2844	3.8780	4.2336

2	06	28	01	0.5104	0.9367	1.4645
2	06	28	02	0.8534	1.2206	1.6116
2	06	28	03	0.7998	1.1842	1.6399
2	06	28	04	3.6735	4.0517	4.4830
2	06	28	05	3.6279	3.9672	4.3065
2	06	28	06	3.5564	3.9508	4.3826
2	06	28	07	0.9150	1.3110	1.7820
2	06	28	08	0.7888	1.1803	1.5718
2	06	28	09	1.0461	1.4322	1.8282
2	06	28	10	0.8607	1.2749	1.6868
2	06	31	01	3.5743	4.4192	5.0807
2	06	31	02	0.5736	1.3653	2.0471
2	06	31	03	3.9210	4.6616	5.3203
2	06	31	04	0.5616	1.3974	2.1002
2	06	31	05	3.9829	4.7536	5.3920
2	06	31	06	0.9486	1.6512	2.2998
2	06	31	07	4.1498	4.8596	5.5379
2	06	31	08	0.7469	1.4798	2.1777
2	06	31	09	4.3296	5.0758	5.8360
2	06	31	10	1.1472	1.8672	2.5356
2	06	32	01	0.5307	1.4046	2.5503
2	06	32	02	1.1090	1.9504	3.3510
2	06	32	03	0.4641	1.3092	2.4054
2	06	32	04	0.6190	1.5334	2.6872
2	06	32	05	0.6596	1.7596	2.9866
2	06	32	06	0.6036	1.5045	2.6952
2	06	32	07	0.6093	1.5318	2.6649
2	06	32	08	0.7209	1.6452	2.8179
2	06	32	09	0.6357	1.5276	2.6913
2	06	32	10	0.7733	1.6310	2.7911
2	06	33	01	0.9019	2.1079	2.8315
2	06	33	02	1.0516	2.1884	2.9004
2	06	33	03	0.5528	1.6992	2.4680
2	06	33	04	1.2520	2.2861	3.2914
2	06	33	05	0.5493	1.5230	2.2146
2	06	33	06	0.9042	1.8170	2.5310
2	06	33	07	0.8880	1.9848	2.5998
2	06	33	08	1.1173	1.9818	2.6748
2	06	33	09	0.6430	1.7606	2.4871
2	06	33	10	0.8008	1.8608	2.5968

2	06	34	01	0.5992	1.5342	2.8362
2	06	34	02	0.5120	1.5120	2.7460
2	06	34	03	0.8295	1.8625	3.1255
2	06	34	04	0.7192	1.7122	3.0332
2	06	34	05	0.8199	1.8598	3.0919
2	06	34	06	0.4123	1.6421	3.0765
2	06	34	07	0.4998	1.4376	2.5545
2	06	34	08	0.6444	1.5786	2.7405
2	06	34	09	0.4008	1.4218	2.6738
2	06	34	10	0.7294	1.6708	2.8309
2	06	35	01	0.5172	1.5450	2.5701
2	06	35	02	3.9249	4.9698	6.0408
2	06	35	03	0.7008	1.8068	2.9698
2	06	35	04	0.3466	1.4756	2.6846
2	06	35	05	0.6777	1.7460	2.8683
2	06	35	06	0.7450	1.8730	3.0400
2	06	35	07	0.6831	1.7577	2.8665
2	06	35	08	0.7557	1.8600	2.9715
2	06	35	09	0.6025	1.6935	2.8355
2	06	35	10	0.5052	1.6332	2.7522
2	06	36	01	0.5358	1.5492	2.6049
2	06	36	02	0.7488	1.7865	2.7423
2	06	36	03	0.5416	1.6009	2.5189
2	06	36	04	0.5841	1.6299	2.5893
2	06	36	05	0.6692	1.7762	2.7545
2	06	36	06	0.3381	1.4334	2.4162
2	06	36	07	0.6298	1.6936	2.6431
2	06	36	08	0.6738	1.6890	2.5938
2	06	36	09	0.5337	1.5660	2.5371
2	06	36	10	0.4698	1.5183	2.4615
2	06	41	01	5.9399	6.2900	
2	06	41	02	1.0654	1.2160	
2	06	41	03	3.3407	3.7475	
2	06	41	04	5.6922	6.0318	
2	06	41	05	3.3876	3.7578	
2	06	41	06	0.8603	1.2146	
2	06	41	07	5.9145	6.2799	
2	06	41	08	5.7829	6.1363	
2	06	41	09	3.0792	3.4452	
2	06	41	10	0.8354	1.2152	

2	06	42	01	3.5411	3.8801
2	06	42	02	3.2042	3.5618
2	06	42	03	0.9112	1.2517
2	06	42	04	0.8737	1.2235
2	06	42	05	1.0670	1.4225
2	06	42	06	5.0101	5.3674
2	06	42	07	3.5550	3.9252
2	06	42	08	0.9565	1.3060
2	06	42	09	0.8270	1.1390
2	06	42	10	5.4027	5.7282
2	06	43	01	1.1172	1.4241
2	06	43	02	5.4505	5.7964
2	06	43	03	5.4877	5.8357
2	06	43	04	3.1946	3.5228
2	06	43	05	5.2816	5.6140
2	06	43	06	2.8784	3.1955
2	06	43	07	1.0932	1.4343
2	06	43	08	3.3858	3.7077
2	06	43	09	5.2276	5.5432
2	06	43	10	3.1355	3.4310
2	06	44	01	3.5114	3.6360
2	06	44	02	5.8592	6.0184
2	06	44	03	3.7798	3.9126
2	06	44	04	3.8616	4.0042
2	06	44	05	0.8406	1.0074
2	06	44	06	5.6724	5.7942
2	06	44	07	1.1842	1.3482
2	06	44	08	5.7614	5.9082
2	06	44	09	1.1870	1.3712
2	06	44	10	1.4146	1.5750
2	06	45	01	1.2474	1.4022
2	06	45	02	3.6138	3.7452
2	06	45	03	1.1040	1.2586
2	06	45	04	6.0702	6.2082
2	06	45	05	3.0716	3.2078
2	06	45	06	0.9950	1.1214
2	06	45	07	5.9740	6.1280
2	06	45	08	1.2094	1.1786
2	06	45	09	6.5654	3.7088
2	06	45	10	3.9010	4.0480

2	06	46	01	5.5432	5.6740
2	06	46	02	1.1688	1.3030
2	06	46	03	5.8072	5.9278
2	06	46	04	1.2668	1.4453
2	06	46	05	5.4830	5.6262
2	06	46	06	3.3286	3.4662
2	06	46	07	3.4900	3.6324
2	06	46	08	3.4824	3.6188
2	06	46	09	6.1376	6.3108
2	06	46	10	1.5302	1.6978
2	06	47	01	1.1196	1.6026
2	06	47	02	1.1042	1.5548
2	06	47	03	3.8110	4.2794
2	06	47	04	4.5712	5.0484
2	06	47	05	0.8967	1.3731
2	06	47	06	2.9198	3.4196
2	06	47	07	4.5069	5.0185
2	06	47	08	0.9980	1.4392
2	06	47	09	1.1420	1.6196
2	06	47	10	3.8755	4.3627
2	06	48	01	4.4120	4.6212
2	06	48	02	3.8736	4.0878
2	06	48	03	0.9830	1.2226
2	06	48	04	1.1666	1.3706
2	06	48	05	3.8736	4.1016
2	06	48	06	1.2976	1.5172
2	06	48	07	1.2358	1.4682
2	06	48	08	3.6544	3.8986
2	06	48	09	3.6161	3.8384
2	06	48	10	3.8869	4.1295
2	06	49	01	0.7184	0.9406
2	06	49	02	3.4946	3.7144
2	06	49	03	4.4064	4.6058
2	06	49	04	3.6889	3.8944
2	06	49	05	4.3098	4.5436
2	06	49	06	4.4510	4.6760
2	06	49	07	0.8576	1.0768
2	06	49	08	0.8202	1.0581
2	06	49	09	0.8913	1.1283
2	06	49	10	4.2628	4.4716

2	06	50	01	3.8830	4.1210
2	06	50	02	3.3453	3.5784
2	06	50	03	1.0173	1.2492
2	06	50	04	0.9634	1.1848
2	06	50	05	0.4833	0.7050
2	06	50	06	0.8646	1.0718
2	06	50	07	0.8581	1.0509
2	06	50	08	3.7824	3.9870
2	06	50	09	0.7207	0.9403
2	06	50	10	5.9340	6.1689
2	06	51	01	4.5308	4.7262
2	06	51	02	0.7716	0.9402
2	06	51	03	2.7560	2.9634
2	06	51	04	2.5607	2.7733
2	06	51	05	0.6732	0.8715
2	06	51	06	3.0002	3.2188
2	06	51	07	0.8008	1.0036
2	06	51	08	3.4942	3.7108
2	06	51	09	0.5104	0.7345
2	06	51	10	2.5110	2.7180
2	06	52	01	0.5744	0.7438
2	06	52	02	2.6004	2.8248
2	06	52	03	4.7724	4.9768
2	06	52	04	0.4497	0.6465
2	06	52	05	2.7002	2.8494
2	06	52	06	5.3654	5.5670
2	06	52	07	1.3394	1.4994
2	06	52	08	5.7158	5.8750
2	06	52	09	4.5432	4.6886
2	06	52	10	0.5817	0.7154
2	06	53	01	4.8664	4.9962
2	06	53	02	2.6384	2.7780
2	06	53	03	4.7142	4.8726
2	06	53	04	0.7753	0.9168
2	06	53	05	4.4662	4.6282
2	06	53	06	4.8600	5.0220
2	06	53	07	0.9378	1.0992
2	06	53	08	4.6546	4.8216
2	06	53	09	2.4972	2.6546

2	07	11	01	1.2358	2.1370	3.1998	4.1662	5.1650	6.1012
2	07	11	02	1.2862	2.2018	3.2356	4.1984	5.1162	6.0134
2	07	11	03	1.1888	2.2588	3.1784	4.1298	5.1310	6.0860
2	07	11	04	1.3932	2.2748	3.2234	4.1504	5.1092	6.1184
2	07	11	05	1.2778	2.2820	3.2777	4.2370	5.1824	6.1108
2	07	11	06	1.2484	2.2140	3.0808	4.0070	4.9668	6.0202
2	07	11	07	1.2422	2.2428	3.2318	4.1970	5.0842	6.0032
2	07	11	08	1.3761	2.2800	3.1680	4.1358	5.1180	6.1432
2	07	11	09	1.2558	2.2246	3.2652	4.2040	5.1342	6.0510
2	07	11	10	1.3804	2.3321	3.4002	4.2636	5.2022	6.1462
2	07	12	01	1.2510	2.2487	3.1434	4.1382	5.0930	6.0828
2	07	12	02	1.3414	2.2372	3.1854	4.2164	5.0876	6.0660
2	07	12	03	1.3853	2.2751	3.3120	4.2360	5.2452	6.1608
2	07	12	04	1.3676	2.2616	3.1621	4.1788	5.1864	6.1444
2	07	12	05	1.4986	2.4547	3.3854	4.2737	5.2520	6.1705
2	07	12	06	1.2192	2.1601	3.1454	4.0604	5.0482	5.9576
2	07	12	07	1.2936	2.2358	3.2409	4.2274	5.1548	6.2114
2	07	12	08	1.3768	2.3145	3.2228	4.3025	5.0960	6.1626
2	07	12	09	1.3396	2.2632	3.1834	4.1078	5.0602	6.0838
2	07	12	10	1.2348	2.2031	3.0984	4.0314	4.9872	5.9644
2	07	13	01	0.4555	1.3052	2.3828	3.2934	4.3731	5.2621
2	07	13	02	1.2850	2.1775	3.1494	4.1166	5.0356	5.9900
2	07	13	03	1.3082	2.1512	3.1030	4.1348	5.0336	5.9248
2	07	13	04	1.2424	2.1248	3.1376	4.0162	5.0654	5.9171
2	07	13	05	1.2752	2.0589	3.1292	4.0530	4.9624	5.9558
2	07	13	06	1.2966	2.1989	3.1764	4.0254	5.0498	5.8830
2	07	13	07	1.1754	2.0730	3.1282	4.1054	5.1033	6.0648
2	07	13	08	1.2360	2.1516	3.1448	4.0420	5.0022	5.9009
2	07	13	09	1.3004	2.2524	3.2907	4.2196	5.1724	6.0644
2	07	13	10	1.2118	2.0771	3.1122	4.0051	4.9949	5.8758
2	07	16	01	1.1489	2.1636	3.1029	4.1010	5.1114	6.0186
2	07	16	02	1.2270	2.1510	3.0886	4.0989	5.1403	6.1172
2	07	16	03	1.2424	2.1766	3.1398	4.1372	5.0496	6.0684
2	07	16	04	1.2576	2.2704	3.2430	4.1824	5.1382	6.1552
2	07	16	05	1.2690	2.2244	3.1562	4.1324	5.1340	6.1432
2	07	16	06	1.2226	2.0872	3.0568	4.1200	5.0566	5.9518
2	07	16	07	1.2918	2.1650	3.1906	4.1766	5.1810	6.1014
2	07	16	08	1.1902	2.1470	3.1142	4.0780	5.0644	5.9966
2	07	16	09	1.1626	2.1374	3.1078	4.0430	5.0802	6.0908
2	07	16	10	1.2508	2.2640	3.2888	4.2632	5.2280	6.1904

2	07	18	01	0.9282	1.6184	2.4752	3.2504	3.9678	4.6920
2	07	18	02	0.8398	1.5674	2.3494	3.1348	3.9426	4.6478
2	07	18	03	1.0298	1.7182	2.4484	3.2146	3.9954	4.7658
2	07	18	04	1.0456	1.7502	2.4326	3.1328	3.8790	4.6202
2	07	18	05	1.0736	1.7384	2.4614	3.2014	3.9934	4.6794
2	07	18	06	1.0642	1.7918	2.5238	3.2690	3.9982	4.7506
2	07	18	07	1.1247	1.8356	2.5548	3.3220	4.0880	4.8124
2	07	18	08	1.0756	1.7523	2.5191	3.2647	3.9828	4.6932
2	07	18	09	1.1250	1.8030	2.5318	3.2618	4.0728	4.8108
2	07	18	10	1.0128	1.7380	2.4894	3.2182	4.0082	4.7342

2	07	21	01	5.1374	5.6984	6.2594
2	07	21	02	2.9308	3.4782	3.9950
2	07	21	03	0.8118	1.3794	1.9338
2	07	21	04	3.6597	4.2273	4.7850
2	07	21	05	0.9044	1.4178	1.9584
2	07	21	06	0.9362	1.5066	2.0584
2	07	21	07	0.8602	1.4076	1.9380
2	07	21	08	3.8556	4.3928	4.9742
2	07	21	09	0.8976	1.4487	1.9899
2	07	21	10	3.8379	4.3890	4.9071

2	07	22	01	5.2156	5.5250	5.8412
2	07	22	02	0.9928	1.3260	1.6966
2	07	22	03	0.2210	0.5542	0.8874
2	07	22	04	2.6452	2.9784	3.3252
2	07	22	05	0.2278	0.5678	0.8976
2	07	22	06	5.4332	5.7494	6.0792
2	07	22	07	0.8806	1.2104	1.5538
2	07	22	08	3.2088	3.5644	3.9116
2	07	22	09	4.1114	4.4354	4.7759
2	07	22	10	0.9724	1.3124	1.6524

2	07	23	01	2.8560	3.3830	3.6550
2	07	23	02	3.3320	3.9372	4.2296
2	07	23	03	2.9614	3.5836	3.8760
2	07	23	04	0.3930	0.9870	1.3140
2	07	23	05	3.8284	4.4608	4.7906
2	07	23	06	0.2210	0.8704	1.1912
2	07	23	07	2.8998	3.5292	3.8286
2	07	23	08	3.2266	3.8318	4.1548
2	07	23	09	3.7851	4.3857	4.6992
2	07	23	10	0.5520	1.1670	1.4940

2	07	24	01	0.2346	0.5440	1.0540
2	07	24	02	0.3060	0.6154	1.1968
2	07	24	03	1.0574	1.3838	1.9618
2	07	24	04	4.1480	4.4846	5.0932
2	07	24	05	3.1500	3.4530	3.9990
2	07	24	06	0.4116	0.7560	1.3468
2	07	24	07	0.9330	1.2840	1.8120
2	07	24	08	3.5610	3.9210	4.4640
2	07	24	09	1.1715	1.4916	2.0163
2	07	24	10	3.5496	3.9202	4.4404
2	07	25	01	0.8326	1.2921	1.6196
2	07	25	02	3.3176	3.7236	4.0571
2	07	25	03	0.8036	1.2068	1.5652
2	07	25	04	3.6239	4.0207	4.3214
2	07	25	05	0.7230	1.1310	1.4340
2	07	25	06	0.9340	1.3648	1.7542
2	07	25	07	3.5495	3.9618	4.3121
2	07	25	08	2.7196	3.0992	3.4502
2	07	25	09	0.6240	1.0912	1.4784
2	07	25	10	0.4386	0.8466	1.1764
2	07	26	01	1.1122	1.3522	1.6050
2	07	26	02	1.0573	1.2945	1.5177
2	07	26	03	3.4748	3.6904	3.9088
2	07	26	04	0.9827	1.2648	1.5004
2	07	26	05	3.8511	4.1415	4.3692
2	07	26	06	3.8190	4.0350	4.2620
2	07	26	07	0.6604	0.8996	1.1076
2	07	26	08	0.7623	1.0032	1.2177
2	07	26	09	4.2240	4.4864	4.7584
2	07	26	10	0.7887	1.0857	1.3662
2	07	27	01	3.8280	4.4088	4.7322
2	07	27	02	0.9496	1.5299	1.8183
2	07	27	03	1.2070	1.7126	1.9890
2	07	27	04	1.5266	2.1352	2.3970
2	07	27	05	0.7656	1.3860	1.6665
2	07	27	06	1.1662	1.7102	1.9924
2	07	27	07	1.1104	1.7740	2.0834
2	07	27	08	3.7024	4.3584	4.6560
2	07	27	09	0.5148	1.1088	1.4619
2	07	27	10	3.6498	4.1679	4.4385

2	07	28	01	3.6270	4.0021	4.4175
2	07	28	02	3.8643	4.2768	4.7025
2	07	28	03	4.1650	4.6614	5.0150
2	07	28	04	0.5301	0.9548	1.3477
2	07	28	05	3.6735	4.1044	4.4969
2	07	28	06	4.8858	5.3278	5.7358
2	07	28	07	4.0612	4.5547	5.0223
2	07	28	08	0.7872	1.2288	1.6928
2	07	28	09	3.6663	4.0953	4.4979
2	07	28	10	3.7060	4.1344	4.5186

2	07	31	01	0.4688	1.2570	1.9794
2	07	31	02	3.7908	4.6612	5.4532
2	07	31	03	0.5834	1.3443	2.2053
2	07	31	04	3.8594	4.7250	5.5826
2	07	31	05	0.4267	1.2807	2.0766
2	07	31	06	3.6149	4.4528	5.2942
2	07	31	07	0.6612	1.4907	2.2705
2	07	31	08	3.7780	4.5581	5.3085
2	07	31	09	0.5182	1.3090	2.1343
2	07	31	10	3.6655	4.4915	5.3504

2	07	32	01	0.4644	1.1940	2.1564
2	07	32	02	3.8126	4.5998	5.5374
2	07	32	03	0.8174	1.5454	2.4278
2	07	32	04	4.0962	4.7390	5.6670
2	07	32	05	0.6092	1.3363	2.2423
2	07	32	06	3.8932	4.5980	5.4916
2	07	32	07	0.9603	1.6442	2.4996
2	07	32	08	3.9498	4.6127	5.5080
2	07	32	09	0.5594	4.6127	5.5080
2	07	32	10	3.7273	4.3916	5.2977

2	07	33	01	0.4674	1.5429	2.1670
2	07	33	02	3.7780	4.8716	5.5860
2	07	33	03	0.8972	1.9635	2.6480
2	07	33	04	4.2296	5.3616	6.0812
2	07	33	05	0.4851	1.5162	2.1850
2	07	33	06	3.7600	4.7661	5.4074
2	07	33	07	0.6598	1.7126	2.4446
2	07	33	08	4.2016	5.3476	6.0348
2	07	33	09	0.7706	1.8010	2.4714
2	07	33	10	3.9554	4.9458	5.5932

2	07	34	01	0.3506	1.3433	2.4260
2	07	34	02	4.0279	5.0215	6.0475
2	07	34	03	0.5163	4.5927	2.6808
2	07	34	04	0.8433	1.9071	2.9790
2	07	34	05	0.4208	1.3937	2.4611
2	07	34	06	3.9032	4.9166	5.9759
2	07	34	07	0.4329	1.4571	2.4912
2	07	34	08	4.1392	5.0888	6.0672
2	07	34	09	0.9716	1.9706	2.9498
2	07	34	10	0.9314	1.9439	2.9762

2	07	35	01	0.5272	1.5820	2.6656
2	07	35	02	4.3731	5.3784	6.3900
2	07	35	03	0.5405	1.5638	2.5988
2	07	35	04	4.1615	5.1920	6.2288
2	07	25	05	0.6443	1.6343	2.6342
2	07	35	06	4.1322	5.0778	6.0458
2	07	35	07	0.6516	1.6830	2.7270
2	07	35	08	4.1346	5.1120	6.1506
2	07	35	09	0.6125	1.6142	2.6663
2	07	35	10	4.2596	5.2667	6.3089

2	07	36	01	0.3336	1.3785	2.3145
2	07	36	02	0.7502	1.8266	2.7950
2	07	36	03	0.3049	1.3048	2.2885
2	07	36	04	3.9787	5.0056	6.0451
2	07	36	05	0.4186	1.4284	2.4553
2	07	36	06	3.9693	5.3345	5.9818
2	07	36	07	0.3479	1.3919	2.3756
2	07	36	08	3.9760	5.0619	6.0309
2	07	36	09	0.9385	1.9384	2.9725
2	07	36	10	0.6480	1.6785	2.6406

2	07	41	01	3.6470	4.0534
2	07	41	02	5.4066	5.8314
2	07	41	03	3.8894	4.3090
2	07	41	04	0.8878	1.3246
2	07	41	05	0.8564	1.2314
2	07	41	06	1.0786	1.4754
2	07	41	07	5.5736	5.9738
2	07	41	08	3.5619	3.9207
2	07	41	09	0.8800	1.2157
2	07	41	10	2.7276	3.0741

2	07	42	01	1.2015	1.5189
2	07	42	02	0.4729	0.8149
2	07	42	03	1.0366	1.3855
2	07	42	04	5.6515	6.0061
2	07	42	05	2.9039	3.2717
2	07	42	06	3.3574	3.7240
2	07	42	07	1.0081	1.3111
2	07	42	08	5.8265	6.1541
2	07	42	09	5.0395	5.3164
2	07	42	10	0.7651	1.0750

2	07	43	01	0.2463	1.5379
2	07	43	02	2.9101	3.2182
2	07	43	03	1.0692	1.3902
2	07	44	04	3.2141	3.5192
2	07	43	05	5.3700	5.7138
2	07	43	06	0.9408	1.2714
2	07	43	07	3.2291	3.5336
2	07	43	08	0.8564	1.1372
2	07	43	09	2.7756	3.0627
2	07	43	10	4.8621	5.1726

2	07	44	01	3.0472	3.1954
2	07	44	02	3.0804	3.2454
2	07	44	03	5.8366	5.9886
2	07	44	04	0.9648	1.1440
2	07	44	05	5.8824	6.0412
2	07	44	06	1.2732	1.4754
2	07	44	07	5.7652	5.9206
2	07	44	08	5.7218	5.8874
2	07	44	09	5.7568	5.9146
2	07	44	10	0.9562	1.1286

2	07	45	01	1.0506	1.2162
2	07	45	02	5.9275	6.0628
2	07	45	03	0.6152	0.7505
2	07	45	04	0.8834	1.0426
2	07	45	05	3.4298	3.5756
2	07	45	06	3.1246	3.2744
2	07	45	07	1.2214	1.3812
2	07	45	08	3.5174	3.6890
2	07	45	09	3.4208	3.5718
2	07	45	10	3.3978	3.5508

2	07	46	01	3.4220	3.5554
2	07	46	02	0.5624	0.7068
2	07	46	03	5.3050	5.4240
2	07	46	04	0.5596	0.6966
2	07	46	05	5.6212	5.7690
2	07	46	06	3.2772	3.4222
2	07	46	07	6.1344	6.2942
2	07	46	08	3.3460	3.4988
2	07	46	09	0.7712	0.9026
2	07	46	10	1.0606	1.1962
2	07	47	01	0.0434	1.5847
2	07	47	02	4.1374	4.6676
2	07	47	03	4.1432	4.6168
2	07	47	04	1.1272	1.5884
2	07	47	05	1.4706	1.9486
2	07	47	06	4.0653	4.5122
2	07	47	07	1.1944	1.6502
2	07	47	08	1.2360	1.7132
2	07	47	09	4.4130	4.8838
2	07	47	10	4.0468	4.5340
2	07	48	01	0.9493	1.1911
2	07	48	02	0.8710	1.1455
2	07	48	03	1.1118	1.3622
2	07	48	04	3.7935	4.0584
2	07	48	05	3.8144	4.0814
2	07	48	06	0.8873	1.1363
2	07	48	07	4.5249	4.7691
2	07	48	08	4.1382	4.4061
2	07	48	09	0.8610	1.1354
2	07	48	10	1.0238	1.2866
2	07	49	01	3.6418	3.8713
2	07	49	02	0.9950	1.2431
2	07	49	03	4.6736	4.8814
2	07	49	04	1.0678	1.2902
2	07	49	05	0.9864	1.2489
2	07	49	06	0.9882	1.2216
2	07	49	07	1.6972	1.9645
2	07	49	08	1.0330	1.2703
2	07	49	09	3.6100	3.8908
2	07	49	10	4.0186	4.3021

2	07	50	01	4.1992	4.4848
2	07	50	02	4.2284	4.4507
2	07	50	03	1.3872	1.6113
2	07	50	04	4.0568	4.3166
2	07	50	05	4.0635	4.3212
2	07	50	06	4.0640	4.3016
2	07	50	07	3.6946	3.9433
2	07	50	08	3.6557	3.9302
2	07	50	09	1.0190	1.2761
2	07	50	10	0.6911	0.9287

2	07	51	01	6.0396	6.2206
2	07	51	02	3.1232	3.3110
2	07	51	03	0.9626	1.1440
2	07	51	04	3.2682	3.4702
2	07	51	05	1.6182	1.8130
2	07	51	06	5.3058	5.1028
2	07	51	07	0.9098	1.0844
2	07	51	08	0.6864	0.8696
2	07	51	09	5.7060	5.9118

2	07	52	01	3.4630	3.5944
2	07	52	02	5.3098	5.4430
2	07	52	03	5.6964	5.8408
2	07	52	04	0.9224	1.0834
2	07	52	05	1.1210	1.2964
2	07	52	06	2.7564	2.8744
2	07	52	07	2.8558	2.9968
2	07	52	08	5.6848	5.7912
2	07	52	09	5.6036	5.7310
2	07	52	10	0.8108	0.9598

2	07	53	01	1.1498	1.2624
2	07	53	02	0.8756	0.9848
2	07	53	03	3.3426	3.4686
2	07	53	04	5.4788	5.5826
2	07	53	05	1.1072	1.2232
2	07	53	06	0.4662	0.5802
2	07	53	07	5.0374	5.1494
2	07	53	08	3.1698	3.3124
2	07	53	09	1.1046	1.2304
2	07	53	10	3.3850	3.5154

2	08	11	01	0.6788	1.7214	2.7753	3.8084	4.8397	5.9164
2	08	11	02	0.6268	1.5824	2.6760	3.7736	4.8687	5.8671
2	08	11	03	0.5378	1.5044	2.6143	3.6689	4.7019	5.7185
2	08	11	04	0.7534	1.7770	2.9006	3.9058	5.0115	6.0365
2	08	11	05	0.8561	1.8858	3.0018	4.0047	5.1194	6.2274
2	08	11	06	0.6903	1.6792	2.7152	3.7659	4.8786	5.9267
2	08	11	07	0.4933	1.5533	2.6055	3.5842	4.7059	5.7426
2	08	11	08	0.6864	1.7254	2.7457	3.7482	4.8388	5.9225
2	08	11	09	0.3035	1.3348	2.4352	3.4657	4.6138	5.6336
2	08	11	10	0.4608	1.4520	2.5674	3.7081	4.6912	5.7130
2	08	12	01	0.5318	1.5660	2.6297	3.7046	4.7857	5.7660
2	08	12	02	0.7019	1.6397	2.7538	3.7640	4.8947	5.8494
2	08	12	03	0.7699	1.7860	2.8535	3.8956	5.0072	6.0210
2	08	12	04	0.7462	1.7322	2.8230	3.8412	5.0396	5.9570
2	08	12	05	0.9171	1.8852	3.0902	4.0655	5.1959	6.2002
2	08	12	06	0.6788	1.7326	2.7519	3.8077	4.9067	5.9205
2	08	12	07	0.8529	1.8456	2.8999	3.9693	5.0967	6.1136
2	08	12	08	0.8486	1.9058	3.0100	4.0869	5.1212	6.1729
2	08	12	09	0.7992	1.8604	2.9440	4.0348	5.0280	5.9477
2	08	12	10	0.9185	1.8450	3.0386	4.1107	5.2216	6.2738
2	08	13	01	0.5938	1.5091	2.5832	3.5478	4.7098	5.6903
2	08	13	02	0.6582	1.5560	2.7013	3.5286	4.6949	5.6056
2	08	13	03	0.7400	1.6917	2.8199	3.8298	4.9264	5.9574
2	08	13	04	0.7556	1.7506	2.8580	3.7980	4.9286	5.9555
2	08	13	05	0.5795	1.5286	2.6758	3.7413	4.8386	5.8785
2	08	13	06	0.7886	1.8096	2.8995	3.9490	5.0199	5.9821
2	08	13	07	0.6343	1.5806	2.7197	3.6837	4.8272	5.7746
2	08	13	08	0.8126	1.7170	2.8912	3.7830	4.9982	5.9333
2	08	13	09	0.6638	1.7304	2.7577	3.7338	4.8574	5.8290
2	08	13	10	0.7036	1.6324	2.6355	3.5978	4.7252	5.6793
2	08	16	01	0.3990	1.4522	2.5086	3.5810	4.6252	5.6438
2	08	16	02	0.7154	1.7160	2.8094	3.9171	5.0235	6.0438
2	08	16	03	0.7196	1.7632	2.8343	3.8703	4.8962	5.9385
2	08	16	04	0.7314	1.7892	2.8991	3.9393	4.9762	6.0068
2	08	16	05	0.7424	1.7366	2.8232	3.9384	5.0520	6.0438
2	08	16	06	0.8960	1.8890	2.9372	4.0120	5.1152	6.1296
2	08	16	07	0.5250	1.6218	2.7450	3.8318	4.8398	5.8290
2	08	16	08	0.7584	1.8378	2.9672	4.0074	5.0032	6.0388
2	08	16	09	1.0510	2.1386	3.2200	4.2012	5.2577	6.2459
2	08	16	10	0.9754	1.9836	3.0244	4.1322	5.1734	6.2382

2	08	18	01	0.9288	1.6812	2.4694	3.2441	4.0148	4.7232
2	08	18	02	0.9204	1.6928	2.4630	3.2702	4.0928	4.8412
2	08	18	03	0.8412	1.6010	2.4424	3.2822	4.0160	4.7306
2	08	18	04	0.5384	1.2777	2.0686	2.7947	3.6108	4.3519
2	08	18	05	0.9147	1.7119	2.4829	3.3068	4.1587	4.8501
2	08	18	06	0.9466	1.7016	2.4806	3.2576	4.0274	4.7205
2	08	18	07	1.2196	1.9458	2.7772	3.5463	4.3402	5.1168
2	08	18	08	0.8672	1.6770	2.4732	3.3104	4.0538	4.8654
2	08	18	09	0.5374	1.3650	2.1726	2.9652	3.8148	4.5472
2	08	18	10	0.5646	1.4232	2.2072	2.9804	3.7668	4.5978

2	08	21	01	0.5323	1.0720	1.6061
2	08	21	02	0.9110	1.4374	1.9542
2	08	21	03	3.5867	4.0809	4.6318
2	08	21	04	3.3725	3.8966	4.4206
2	08	21	05	3.9948	4.4862	5.0217
2	08	21	06	3.8372	4.3741	4.9040
2	08	21	07	3.3074	3.8618	4.3917
2	08	21	08	0.6366	1.1483	1.6740
2	08	21	09	3.3568	3.9035	4.4593
2	08	21	10	1.0700	1.5712	2.0563

2	08	22	01	3.1239	3.4649	3.7863
2	08	22	02	3.3048	3.6388	3.9698
2	08	22	03	1.0672	1.4297	1.7603
2	08	22	04	0.9552	1.3192	1.6432
2	08	22	05	3.6095	3.9755	4.3670
2	08	22	06	0.7930	1.3120	1.6876
2	08	22	07	1.0081	1.3821	1.7561
2	08	22	08	3.4626	3.7991	4.1766
2	08	22	09	1.3888	1.8053	2.1928
2	08	22	10	0.8158	1.1618	1.5188

2	08	23	01	0.6220	1.1446	1.5215
2	08	23	02	3.6319	4.1828	4.5692
2	08	23	03	0.9162	1.4322	1.8012
2	08	23	04	0.9420	1.5156	1.8804
2	08	23	05	1.1367	1.6359	1.9995
2	08	23	06	0.9208	1.4314	1.8130
2	08	23	07	0.7930	1.3120	1.6876
2	08	23	08	3.3856	3.9148	4.2874
2	08	23	09	1.0365	1.5711	1.9599
2	08	23	10	0.8566	1.4614	1.8408

2	08	24	01	5.5658	5.9636	6.3920
2	08	24	02	0.6358	1.0126	1.4602
2	08	24	03	3.0546	3.4152	3.8514
2	08	24	04	3.3863	3.7511	4.2413
2	08	24	05	1.1424	1.5204	1.9818
2	08	24	06	0.6282	1.0158	1.5144
2	08	24	07	0.8880	1.2480	1.7238
2	08	24	08	0.7878	1.1609	1.6812
2	08	24	09	3.2722	3.6736	4.1740
2	08	24	10	3.4672	3.8422	4.3516

2	08	25	01	0.9104	1.2760	1.5456
2	08	25	02	4.7777	5.2127	5.5772
2	08	25	03	2.2309	2.6851	3.1117
2	08	25	04	2.1251	2.5304	3.0092
2	08	25	05	1.2072	1.6932	2.0484
2	08	25	06	2.2070	2.6225	2.9390
2	08	25	07	1.8844	2.3324	2.7926
2	08	25	08	2.0258	2.4386	2.9108
2	08	25	09	1.8875	2.4678	3.0222
2	08	25	10	1.6156	2.1399	2.6369

2	08	26	01	1.4694	1.7494	1.9304
2	08	26	02	2.0998	2.4030	2.6418
2	08	26	03	2.5617	2.8137	3.0153
2	08	26	04	1.7122	2.0410	2.2722
2	08	26	05	2.0512	2.3636	2.6495
2	08	26	06	1.6992	1.9962	2.2458
2	08	26	07	1.9727	2.2452	2.5247
2	08	26	08	1.0332	1.3000	1.5292
2	08	26	09	2.4128	2.7024	2.9472
2	08	26	10	2.3754	2.6655	2.8608

2	08	27	01	1.5842	2.1620	2.4836
2	08	27	02	1.2744	1.9998	2.3046
2	08	27	03	2.3646	2.9454	3.2598
2	08	27	04	1.5001	2.1658	2.5250
2	08	27	05	1.8744	2.5794	2.8746
2	08	27	06	2.1320	2.7914	3.0734
2	08	27	07	2.5482	3.2167	3.5695
2	08	27	08	1.9105	2.6007	2.9584
2	08	27	09	1.8446	2.5040	2.8502
2	08	27	10	2.3048	3.0020	3.3121

2	08	28	01	2.1636	2.5782	3.0486
2	08	28	02	2.9793	3.4119	3.8625
2	08	28	03	2.2008	2.6460	3.1968
2	08	28	04	3.1012	3.5824	3.9568
2	08	28	05	2.5510	2.9743	3.4891
2	08	28	06	2.1168	2.6022	3.1122
2	08	28	07	2.7545	3.1739	3.6665
2	08	28	08	1.8410	2.3065	2.8525
2	08	28	09	1.6248	2.0862	2.5968
2	08	28	10	2.8280	3.2382	3.7520

2	08	31	01	0.5480	1.4960	2.3836
2	08	31	02	0.6142	1.4550	2.3510
2	08	31	03	4.4568	5.3544	6.2128
2	08	31	04	1.0966	2.0390	2.9150
2	08	31	05	0.9799	1.8409	2.6508
2	08	31	06	0.3868	1.2844	2.1476
2	08	31	07	4.4758	5.3854	6.2926
2	08	31	08	1.2274	2.1298	3.0898
2	08	31	09	1.0356	2.0076	2.9372
2	08	31	10	0.7970	1.7682	2.5802

2	08	32	01	0.7338	1.7473	3.0138
2	08	32	02	1.0111	1.7297	2.9336
2	08	32	03	0.9891	1.7737	2.9607
2	08	32	04	0.7191	1.5543	2.8107
2	08	32	05	1.2922	2.0950	3.2677
2	08	32	06	1.3074	2.1129	3.3990
2	08	32	07	0.8744	1.5461	2.6911
2	08	32	08	0.8824	1.5864	2.7368
2	08	32	09	1.0304	1.7792	2.8272
2	08	32	10	1.2364	1.9980	3.0420

2	08	33	01	0.6642	1.9302	2.7942
2	08	33	02	1.0402	2.2057	3.0526
2	08	33	03	1.0611	2.2059	3.0699
2	08	33	04	0.4827	1.6149	2.6022
2	08	33	05	0.7570	2.0698	3.0448
2	08	33	06	1.3670	2.6180	3.2750
2	08	33	07	1.0791	2.1627	3.0267
2	08	33	08	1.0772	2.3012	3.1049
2	08	33	09	0.9517	2.1235	2.9038
2	08	33	10	0.7047	1.8639	2.6451

2	08	34	01	0.4482	1.5082	2.6692
2	08	34	02	1.9182	3.0182	4.1452
2	08	34	03	1.2523	2.3083	3.7372
2	08	34	04	1.0754	2.1229	3.3204
2	08	34	05	1.0868	2.2600	3.4250
2	08	34	06	0.8357	1.9346	3.2799
2	08	34	07	1.1084	2.3415	3.6472
2	08	34	08	1.0720	2.2320	3.4800
2	08	34	09	1.1204	2.2944	3.5364
2	08	34	10	1.0159	2.1632	3.4227
2	08	35	01	0.7403	1.8086	2.8922
2	08	35	02	0.5990	1.6259	2.6420
2	08	35	03	0.5990	1.6430	2.7070
2	08	35	04	0.5605	1.6063	2.6782
2	08	35	05	0.9957	1.9920	3.0441
2	08	35	06	0.5378	1.6198	2.7338
2	08	35	07	1.0435	2.0765	3.1745
2	08	35	08	0.7070	1.7620	2.9090
2	08	35	09	0.9558	2.0025	3.0663
2	08	35	10	0.7652	1.7597	2.7731
2	08	36	01	1.1094	2.1684	3.3820
2	08	36	02	1.2082	2.2936	3.2305
2	08	36	03	1.1814	2.3754	3.5184
2	08	36	04	1.4448	2.6008	3.7678
2	08	36	05	1.2090	2.3265	3.4263
2	08	36	06	1.2828	2.4168	3.4689
2	08	36	07	1.1014	2.2384	3.3946
2	08	36	08	1.9322	3.1325	4.1050
2	08	36	09	0.9700	2.1035	3.1865
2	08	36	10	1.0484	2.2024	3.3114
2	08	41	01	4.8320	5.3254	
2	08	41	02	5.4802	5.9812	
2	08	41	03	5.3759	5.7804	
2	08	41	04	1.6462	2.1758	
2	08	41	05	4.9037	5.3412	
2	08	41	06	4.4934	4.9498	
2	08	41	07	5.1194	5.6086	
2	08	41	08	4.7016	5.1684	
2	08	41	09	4.2972	4.7964	
2	08	41	10	1.5394	2.0510	

2	08	42	01	4.6864	5.1779
2	08	42	02	1.6948	2.1636
2	08	42	03	1.5836	1.9829
2	08	42	04	4.7502	5.1438
2	08	42	05	4.6165	5.0359
2	08	42	06	1.4561	1.8875
2	08	42	07	4.7531	5.2304
2	08	42	08	1.5145	1.9792
2	08	42	09	1.4718	1.9002
2	08	42	10	4.8404	5.3354

2	08	43	01	1.3978	1.7866
2	08	43	02	1.5006	1.9250
2	08	43	03	5.0579	5.4761
2	08	43	04	1.4472	1.8763
2	08	43	05	1.0850	1.3886
2	08	43	06	1.1694	1.5342
2	08	43	07	1.5130	1.9324
2	08	43	08	1.1372	1.5500
2	08	43	09	4.5790	5.0020
2	08	43	10	1.5736	2.0310

2	08	44	01	4.5254	4.6697
2	08	44	02	4.5258	4.7068
2	08	44	03	5.1000	5.2522
2	08	44	04	5.1896	5.3612
2	08	44	05	4.5416	4.6908
2	08	44	06	1.5958	1.7442
2	08	44	07	4.1782	4.3140
2	08	44	08	4.6120	4.7862
2	08	44	09	4.5377	4.7249
2	08	44	10	4.0190	4.1746

2	08	45	01	1.6204	1.7561
2	08	45	02	2.4434	2.5816
2	08	45	03	5.4674	5.6764
2	08	45	04	1.4102	1.5630
2	08	45	05	1.5618	1.7034
2	08	45	06	4.2784	4.4402
2	08	45	07	5.1212	5.2754
2	08	45	08	1.6802	1.8312
2	08	45	09	4.4376	4.5856
2	08	45	10	1.2422	1.4304

2	08	46	01	1.0872	1.2048
2	08	46	02	1.3170	1.4546
2	08	46	03	1.5618	1.7218
2	08	46	04	1.7988	1.9404
2	08	46	05	4.4810	4.6019
2	08	46	06	1.4868	1.6198
2	08	46	07	1.4406	1.5806
2	08	46	08	1.2780	1.4386
2	08	46	09	1.4086	1.5610
2	08	46	10	0.9971	1.1114
2	08	47	01	1.5394	1.9642
2	08	47	02	1.1528	1.6301
2	08	47	03	5.4862	5.8834
2	08	47	04	1.2158	1.6604
2	08	47	05	6.0072	6.3897
2	08	47	06	1.1301	1.4943
2	08	47	07	2.2552	2.6032
2	08	47	08	2.0122	2.3706
2	08	47	09	1.7487	2.1915
2	08	47	10	1.6540	2.0232
2	08	48	01	4.7748	4.9804
2	08	48	02	5.2134	5.4388
2	08	48	03	1.3112	1.4888
2	08	48	04	1.4180	1.6710
2	08	48	05	1.5012	1.7132
2	08	48	06	1.3646	1.6098
2	08	48	07	1.5774	1.8176
2	08	48	08	6.1592	6.3786
2	08	48	09	5.2122	5.4212
2	08	48	10	1.1450	1.3972
2	08	49	01	0.6518	0.8990
2	08	49	02	1.5160	1.7408
2	08	49	03	4.9411	5.1298
2	08	49	04	5.4632	5.7102
2	08	49	05	1.6254	1.8537
2	08	49	06	5.5186	5.7397
2	08	49	07	5.6338	5.8393
2	08	49	08	5.5126	5.7080
2	08	49	09	1.5304	1.7274
2	08	49	10	1.7904	2.0190

2	08	50	01	3.9332	4.1382
2	08	50	02	4.7032	4.8820
2	08	50	03	0.8800	1.1014
2	08	50	04	1.6134	1.8600
2	08	50	05	0.6915	0.8972
2	08	50	06	1.4790	1.6744
2	08	50	07	5.7654	5.9656
2	08	50	08	1.5696	1.7768
2	08	50	09	0.8158	1.0196
2	08	50	10	5.0066	5.1692

2	08	51	01	4.0720	4.4060
2	08	51	02	4.1116	4.4260
2	08	51	03	3.0344	3.2761
2	08	51	04	0.8601	1.1454
2	08	51	05	5.9111	6.1787
2	08	51	06	0.6150	0.9033
2	08	51	07	3.6514	3.8785
2	08	51	08	3.2814	3.5211
2	08	51	09	3.1526	3.5000
2	08	51	10	0.7754	1.0493

2	08	52	01	1.0522	1.1708
2	08	52	02	3.6352	3.8042
2	08	52	03	0.7642	0.8884
2	08	52	04	3.0486	3.2068
2	08	52	05	3.4220	3.5754
2	08	52	06	5.5426	5.6884
2	08	52	07	0.9952	1.1694
2	08	52	08	3.4724	3.6160
2	08	52	09	0.7050	0.9274
2	08	52	10	3.2556	3.4032

2	08	53	01	1.2006	1.3212
2	08	53	02	1.6706	1.8034
2	08	53	03	5.1866	5.3058
2	08	53	04	5.6108	5.7454
2	08	53	05	0.7220	0.8332
2	08	53	06	3.0690	3.2284
2	08	53	07	1.0634	1.2174
2	08	53	08	0.7674	0.9350
2	08	53	09	6.0738	6.2436
2	08	53	10	5.9590	6.0808

2	09	11	01	0.6488	1.6042	2.6000	3.6998	4.7224	5.7620
2	09	11	02	1.0142	1.9907	3.0009	4.0748	5.1648	6.2046
2	09	11	03	0.4472	1.4714	2.4372	3.5124	4.5680	5.5790
2	09	11	04	1.1793	2.1030	3.1130	4.2104	5.1540	6.3289
2	09	11	05	0.9054	1.9640	3.0507	4.0902	5.1230	6.2189
2	09	11	06	0.4386	1.4667	2.5014	3.5766	4.5604	5.6372
2	09	11	07	0.3772	1.3594	2.3768	3.4260	4.4184	5.4894
2	09	12	01	0.6434	1.6192	2.5736	3.5688	4.6702	5.6784
2	09	12	02	0.6886	1.6856	2.6734	3.7237	4.9200	5.9096
2	09	12	03	0.3388	1.3130	2.3692	3.4974	4.5028	5.4760
2	09	12	04	0.3160	1.3408	2.2388	3.2034	4.3281	5.2764
2	09	12	05	0.7290	1.7910	2.8428	3.8792	4.7776	5.8502
2	09	13	01	0.4256	1.3696	2.4574	3.4666	4.4516	5.4206
2	09	13	02	0.5430	1.4476	2.5802	3.4933	4.6456	5.5906
2	09	13	03	0.4464	1.3602	2.3604	3.4192	4.5049	5.5076
2	09	13	04	0.5372	1.5651	2.5970	3.6708	4.7245	5.6860
2	09	13	05	0.5574	1.4923	2.5832	3.3162	4.4862	5.2946
2	09	13	06	0.6862	1.6006	2.6348	3.7359	4.8157	5.8676
2	09	13	07	0.4218	1.3806	2.3852	3.4088	4.4700	5.3454
2	09	13	08	0.3838	1.3362	2.3772	3.3012	4.4824	5.2924
2	09	16	01	0.1198	1.0976	2.1186	3.0926	4.1692	5.1588
2	09	16	02	0.4622	1.4469	2.4510	3.4833	4.6162	5.5830
2	09	16	03	0.4428	1.4399	2.4343	3.4883	4.4948	5.5163
2	09	16	04	0.7700	1.7388	2.8029	3.8166	4.9425	5.8428
2	09	16	05	0.4145	1.4202	2.5008	3.5617	4.6143	5.6003
2	09	16	06	0.9803	1.9315	2.9750	4.0564	5.1650	6.1797
2	09	16	07	0.5860	1.5482	2.5988	3.5952	4.7076	5.7351
2	09	16	08	0.7758	1.7282	2.7992	3.9266	5.0117	5.9889
2	09	16	09	0.7675	1.7870	2.7778	3.8686	4.9687	6.0177
2	09	16	10	0.6220	1.5690	2.6012	3.7242	4.8470	5.8432

2	09	18	01	1.1218	1.8424	2.6455	3.3821	4.2430	4.9488
2	09	18	02	1.1093	1.7557	2.5497	3.3255	4.1342	4.8545
2	09	18	03	1.0905	1.8510	2.6493	3.3592	4.2167	4.9083
2	09	18	04	0.3582	1.1920	1.9454	2.8674	3.5271	4.3007
2	09	18	05	1.1078	1.8434	2.7308	3.5118	4.3361	5.0595
2	09	18	06	1.3240	2.0228	2.7920	3.5340	4.3714	5.1830
2	09	18	07	1.1405	1.8152	2.6311	3.3599	4.2622	4.9490
2	09	18	08	1.3028	2.0238	2.8388	3.5927	4.4129	5.0902
2	09	18	09	1.2341	1.9680	2.7482	3.6163	4.3554	5.0616
2	09	18	10	0.7727	1.5027	2.2784	3.0752	3.8356	4.5849

2	09	21	01	3.0120	3.4929	4.0102
2	09	21	02	2.8386	3.3126	3.8406
2	09	21	03	1.4106	1.8372	2.3256
2	09	21	04	0.3751	0.8149	1.3543
2	09	21	05	1.2240	1.6818	2.1348
2	09	21	06	3.4282	3.8674	4.3324
2	09	21	07	0.7976	1.2734	1.7816
2	09	21	08	3.5038	3.9520	4.4098
2	09	21	09	0.8698	1.3222	1.7938
2	09	21	10	3.2220	3.7080	4.1898

2	09	22	01	0.9688	1.2524	1.5560
2	09	22	02	3.4148	3.7503	4.1243
2	09	22	03	0.6869	1.0079	1.3429
2	09	22	04	0.4502	0.7658	1.1038
2	09	22	05	1.3109	1.6254	1.9634
2	09	22	06	0.6955	1.0007	1.3347
2	09	22	07	3.2313	3.5603	3.9298
2	09	22	08	5.6622	5.9962	6.3747
2	09	22	09	0.8740	1.2016	1.5560
2	09	22	10	0.8141	1.1581	1.5366

2	09	23	01	3.9572	4.3096	4.6056
2	09	23	02	0.7268	1.0828	1.2764
2	09	23	03	1.0382	1.4192	1.7347
2	09	23	04	0.5480	0.9232	1.2024
2	09	23	05	2.7001	3.0817	3.3281
2	09	23	06	2.7204	3.0948	3.3364
2	09	23	07	0.8052	1.2007	1.4587
2	09	23	08	2.7155	3.1255	3.4445
2	09	23	09	0.7225	1.0490	1.3330
2	09	23	10	2.7717	3.0849	3.3881

2	09	24	01	1.2134	1.4629	1.9154
2	09	24	02	2.9639	3.1939	3.6319
2	09	24	03	0.7004	0.9609	1.4629
2	09	24	04	3.0476	3.2824	3.7400
2	09	24	05	1.0751	1.3501	1.7826
2	09	24	06	5.1518	5.4062	5.7902
2	09	24	07	3.3333	3.5788	4.0488
2	09	24	08	3.6780	3.9490	4.3890
2	09	24	09	0.7734	1.0514	1.4979
2	09	24	10	3.2764	3.5439	3.9944

2	09	25	01	1.1982	1.6006	1.9378
2	09	25	02	1.1988	1.6698	2.0388
2	09	25	03	1.2220	1.5750	1.8840
2	09	25	04	0.5194	1.2124	1.8298
2	09	25	05	0.8262	1.3729	1.8202
2	09	25	06	1.9551	2.3701	2.7811
2	09	25	07	4.9022	5.3402	5.7362
2	09	25	08	3.4897	4.2169	4.7569
2	09	25	09	5.2756	5.7530	6.2360

2	09	26	01	0.2344	0.4408	0.6026
2	09	26	02	4.2351	4.6068	4.9491
2	09	26	03	1.0012	1.3177	1.6312
2	09	26	04	4.2240	4.6542	5.0784
2	09	26	05	5.1449	5.5149	5.8004
2	09	26	06	0.7898	0.9698	1.1645
2	09	26	07	0.7784	1.1384	1.4462
2	09	26	08	4.1878	4.4463	4.6598
2	09	26	09	0.7413	0.9369	1.1760

2	09	27	01	1.4642	1.8742	2.1967
2	09	27	02	1.7736	2.3838	2.9940
2	09	27	03	1.6304	2.1302	2.6783
2	09	27	04	4.8628	5.5236	6.0420
2	09	27	05	4.0400	4.4984	4.8806
2	09	27	06	1.7352	1.9860	2.2264
2	09	27	07	2.0412	3.2652	3.5811
2	09	27	08	4.8636	5.3154	5.6454
2	09	27	09	5.2535	5.7400	6.2391
2	09	27	10	4.2222	5.7006	6.0064

2	09	28	01	4.4453	4.9927	5.4722
2	09	28	02	0.8499	1.3924	1.9923
2	09	28	03	1.8092	2.2172	2.5202
2	09	28	04	0.4878	1.3777	2.2247
2	09	28	05	1.1102	1.5722	2.0054
2	09	28	06	3.3357	3.8925	4.7133
2	09	28	07	1.3883	1.7373	2.1288
2	09	28	08	0.9059	1.3655	1.7255
2	09	28	09	0.5775	1.0675	1.4630
2	09	28	10	1.2994	1.8112	2.1784
2	09	31	01	0.6085	1.5395	2.2017
2	09	31	02	3.9882	4.7771	5.4442
2	09	31	03	0.8732	1.5921	2.3390
2	09	31	04	4.1428	4.8190	5.4706
2	09	31	05	1.0030	1.7902	2.4040
2	09	31	06	4.2670	5.1245	5.8077
2	09	31	07	0.8114	1.8096	2.4578
2	09	31	08	4.3104	5.1792	5.9288
2	09	31	09	0.5166	1.2159	1.8886
2	09	31	10	3.8056	4.5264	5.4808
2	09	32	01	1.2218	1.7826	2.8666
2	09	32	02	1.0940	1.9132	2.8852
2	09	32	03	1.5620	2.3028	3.3284
2	09	32	04	0.6640	1.4208	2.2928
2	09	32	05	0.6347	1.4499	2.4195
2	09	32	06	0.4806	1.2974	2.2542
2	09	32	07	4.2488	5.1864	6.1104
2	09	32	08	1.3932	2.5146	3.5316
2	09	32	09	0.6081	1.5612	2.5755
2	09	32	10	1.5852	2.3380	3.2556
2	09	33	01	0.7497	1.7577	2.3037
2	09	33	02	0.9314	2.3003	2.8111
2	09	33	03	1.0717	2.2799	2.7741
2	09	33	04	0.6378	1.4262	1.9596
2	09	33	05	0.4228	1.3432	1.7560
2	09	33	06	3.4700	4.3002	4.7755
2	09	33	07	0.7414	1.6306	2.1082
2	09	33	08	4.1518	5.0317	5.6169
2	09	33	09	0.2552	1.0436	1.5212
2	09	33	10	3.4440	4.3020	4.7748

2	09	34	01	2.9857	4.0135	5.0260
2	09	34	02	0.0560	1.3020	2.3320
2	09	34	03	1.1752	2.2246	3.3010
2	09	34	04	1.4164	2.4955	3.5557
2	09	34	05	0.8284	1.9273	2.9443
2	09	34	06	1.0193	2.0597	3.0767
2	09	34	07	0.9614	2.0576	3.0701
2	09	34	08	0.9249	1.9869	3.0426
2	09	34	09	0.6941	1.7192	2.7155
2	09	35	01	0.6661	1.7074	2.7136
2	09	35	02	0.4635	1.4805	2.4993
2	09	35	03	0.5452	1.5640	2.5729
2	09	35	04	0.8406	1.8693	2.8872
2	09	35	05	1.1042	2.0861	3.0851
2	09	36	01	1.5494	2.5318	3.3558
2	09	36	02	1.2409	2.3002	3.2641
2	09	36	03	0.8712	1.8488	2.7736
2	09	36	04	0.5393	1.5536	2.5139
2	09	36	05	0.8163	1.7819	2.6475
2	09	36	06	0.5540	1.5404	2.4524
2	09	36	07	0.6867	1.6758	2.7576
2	09	36	08	0.5317	1.5136	2.5099
2	09	36	09	0.8337	1.8534	2.7822
2	09	36	10	0.6525	1.6452	2.6055
2	09	41	01	5.7762	6.0996	
2	09	41	02	5.9906	6.2834	
2	09	41	03	3.2798	3.5825	
2	09	41	04	0.7126	1.0153	
2	09	41	05	1.2057	1.5285	
2	09	41	06	0.9408	1.2999	
2	09	41	07	3.5515	3.8600	
2	09	41	08	0.9483	1.2558	
2	09	41	09	3.3141	3.6306	
2	09	41	10	1.1476	1.5076	

2	09	42	01	3.2295	3.5442
2	09	42	02	1.3510	1.6833
2	09	42	03	1.0108	1.3033
2	09	42	04	2.0277	2.3448
2	09	42	05	3.2940	3.6354
2	09	42	06	1.0660	1.4226
2	09	42	07	5.9145	6.2274
2	09	42	08	5.8943	6.2454
2	09	42	09	0.7337	1.0823
2	09	42	10	3.4420	3.8201

2	09	43	01	0.5378	0.8654
2	09	43	02	3.3227	3.6861
2	09	43	03	5.4348	5.8548
2	09	43	04	3.1589	3.5396
2	09	43	05	5.7435	6.0156
2	09	43	06	3.3139	3.6199
2	09	43	07	0.9609	1.2906
2	09	43	08	3.3114	3.6621
2	09	43	09	5.3973	5.7450
2	09	43	10	0.8107	1.1353

2	09	44	01	1.2226	1.3478
2	09	44	02	3.4940	3.6302
2	09	44	03	0.8919	1.0199
2	09	44	04	3.4164	3.5280
2	09	44	05	1.0071	1.1271
2	09	44	06	4.0038	4.1446
2	09	44	07	3.2406	3.3722
2	09	44	08	1.0432	1.1413
2	09	44	09	5.6696	5.7996
2	09	44	10	1.0956	1.2416

2	09	45	01	0.8288	0.9438
2	09	45	02	5.3356	5.4684
2	09	45	03	3.1414	3.2856
2	09	45	04	3.5650	3.6808
2	09	45	05	0.7696	0.9194
2	09	45	06	4.0214	4.1438
2	09	45	07	1.0573	1.1957
2	09	45	08	0.9982	1.1530
2	09	45	09	3.1032	3.2624
2	09	45	10	3.3496	3.4852

2	09	46	01	2.7364	2.8392
2	09	46	02	0.9940	1.1044
2	09	46	03	0.9174	1.0320
2	09	46	04	5.4598	5.5786
2	09	46	05	1.3216	1.4065
2	09	46	06	0.9538	1.0736
2	09	46	07	3.3009	3.4027
2	09	46	08	0.6638	0.7732
2	09	46	09	3.1864	3.2875
2	09	46	10	5.7406	5.8360
2	09	47	01	0.7276	1.0716
2	09	47	02	3.5345	3.8483
2	09	47	03	1.8523	2.1334
2	09	47	04	1.2300	1.5630
2	09	47	05	4.2355	4.6390
2	09	47	06	1.0214	1.4564
2	09	47	07	0.9814	1.4270
2	09	47	08	1.4604	1.7793
2	09	47	09	4.4473	4.8289
2	09	47	10	1.1558	1.4919
2	09	48	01	4.9768	5.2150
2	09	48	02	1.3121	1.5239
2	09	48	03	0.9491	1.1209
2	09	48	04	3.6330	3.8334
2	09	48	05	4.7023	4.8949
2	09	48	06	4.7848	4.9932
2	09	48	07	3.5958	3.8343
2	09	48	08	3.3016	3.5266
2	09	48	09	2.3934	2.6283
2	09	48	10	1.5278	1.7192
2	09	49	01	2.7060	2.9046
2	09	49	02	3.5069	3.6653
2	09	49	03	0.9208	1.1022
2	09	49	04	1.1536	1.3867
2	09	49	05	1.4854	1.7050
2	09	49	06	1.1145	1.3134
2	09	49	07	0.8325	1.0464
2	09	49	08	3.5554	3.7661
2	09	49	09	2.8725	3.1030
2	09	49	10	0.7112	0.9366

2	09	50	01	0.9240	1.1187
2	09	50	02	0.7204	0.9214
2	09	50	03	0.5835	0.7473
2	09	50	04	4.0704	4.2726
2	09	50	05	0.8781	1.0387
2	09	50	06	4.0616	4.2651
2	09	50	07	3.7622	3.9409
2	09	50	08	3.8821	4.1127
2	09	50	09	1.0768	1.2830
2	09	50	10	3.4594	3.6560
2	09	51	01	5.9456	6.1102
2	09	51	02	3.6268	3.8094
2	09	51	03	0.9892	1.1804
2	09	51	04	1.3677	1.4830
2	09	51	05	6.1104	6.2898
2	09	51	06	0.8256	1.0214
2	09	51	07	3.5982	3.7904
2	09	51	08	0.7516	0.9644
2	09	51	09	4.2440	4.3906
2	09	51	10	1.2772	1.4470
2	09	52	01	0.9939	1.1332
2	09	52	02	5.8366	5.9660
2	09	52	03	3.1596	3.2590
2	09	52	04	6.0068	6.1856
2	09	52	05	3.6354	3.7766
2	09	52	06	3.1896	3.3828
2	09	52	07	1.1446	1.2442
2	09	52	08	1.0188	1.1852
2	09	52	09	2.9962	3.1520
2	09	52	10	1.0566	1.2340
2	09	53	01	3.4224	3.5290
2	09	53	02	0.9794	1.1342
2	09	53	03	5.2760	5.4156
2	09	53	04	3.8699	3.9532
2	09	53	05	5.5384	5.6718
2	09	53	06	5.9580	6.0858
2	09	53	07	5.8724	5.9932
2	09	53	08	1.4372	1.5680
2	09	53	09	4.2224	4.3490
2	09	53	10	5.7850	5.8694

2	10	11	01	0.5402	1.5822	2.6180	3.6140	4.6304	5.6016
2	10	11	02	1.0522	2.0086	3.0078	3.9894	4.9516	5.9008
2	10	11	03	0.9538	1.8954	2.8334	3.7280	4.8236	5.7414
2	10	11	04	0.4294	1.3860	2.4300	3.3906	4.4996	5.4488
2	10	11	05	0.7300	1.7086	2.6822	3.6480	4.6938	5.7624
2	10	11	06	1.1640	2.0490	3.1015	4.0388	5.0110	6.0952
2	10	11	07	0.6748	1.7634	2.6458	3.6270	4.6764	5.6619
2	10	11	08	0.8818	1.9052	2.8474	3.8044	4.9186	5.9290
2	10	11	09	0.7250	1.6898	2.6812	3.7514	4.7502	5.6610
2	10	11	10	0.4936	1.3418	2.3228	3.3212	4.3362	5.2229

2	10	12	01	0.6108	1.5966	2.5270	3.5362	4.5148	5.5936
2	10	12	02	0.7496	1.6482	2.6058	3.6162	4.5322	5.5332
2	10	12	03	0.6144	1.5672	2.5124	3.4028	4.3018	5.3899
2	10	12	04	0.6870	1.5740	2.6078	3.4292	4.5056	5.4816
2	10	12	05	0.7306	1.6378	2.6178	3.5698	4.5568	5.4780
2	10	12	06	0.9089	1.8092	2.7800	3.7398	4.7910	5.8144
2	10	12	07	0.8847	1.8626	2.8416	3.8840	4.8686	5.8108
2	10	12	08	0.7958	1.7622	2.8570	3.8302	4.7458	5.7142
2	10	12	09	0.7318	1.6432	2.6724	3.6622	4.6388	5.6550
2	10	12	10	0.5284	1.5429	2.5470	3.5420	4.5024	5.3164

2	10	13	01	0.6577	1.6012	2.6128	3.6074	4.5788	5.5444
2	10	13	02	0.9104	1.8396	2.9380	3.9502	4.9868	5.9132
2	10	13	03	0.6960	1.6740	2.7342	3.6474	4.6774	5.6830
2	10	13	04	0.9090	1.9178	2.9144	3.9840	4.9474	5.9498
2	10	13	05	0.8084	1.7318	2.7088	3.6942	4.7452	5.8142
2	10	13	06	0.6440	1.5412	2.5176	3.4994	4.6070	5.9100
2	10	13	07	0.7382	1.7578	2.8236	3.9092	4.9368	5.9322
2	10	13	08	0.8026	1.7148	2.7790	3.8057	4.8258	5.8770
2	10	13	09	0.8350	1.7810	2.7202	3.7015	4.7927	5.8108
2	10	13	10	0.9672	1.9890	2.9967	4.0040	4.9828	5.9558

2	10	16	01	0.7922	1.6660	2.7033	3.6516	4.6249	5.7090
2	10	16	02	0.4874	1.4498	2.4450	3.4232	4.4126	5.5143
2	10	16	0¯	0.5276	1.5033	2.4842	3.5437	4.4692	5.4760
2	10	16	04	0.5050	1.4568	2.3913	3.4255	4.4251	5.4116
2	10	16	05	0.6292	1.6008	2.7206	3.6674	4.6484	5.6065
2	10	16	06	0.6854	1.6621	2.6664	3.7432	4.6472	5.6482
2	10	16	07	0.5332	1.4912	2.4642	3.3686	4.4892	5.4235
2	10	16	08	0.4602	1.5261	2.5107	3.5031	4.4750	5.4201
2	10	16	09	0.8558	1.8970	2.8608	3.7680	4.7904	5.7707
2	10	16	10	0.4446	1.3677	2.4288	3.4712	4.4470	5.4382

2	10	18	01	1.1108	1.8428	2.6642	3.4066	4.0626	4.8044
2	10	18	02	1.1823	1.8878	2.6978	3.4091	4.1632	4.8393
2	10	18	03	0.8024	1.5104	2.2808	2.9636	3.6892	4.3626
2	10	18	04	1.1648	1.8628	2.5690	3.2722	4.0070	4.7893
2	10	18	05	1.2310	1.9212	2.6090	3.2778	3.9748	4.7747
2	10	18	06	1.2676	1.9700	2.7540	3.4581	4.2516	4.9315
2	10	18	07	1.2492	2.0223	2.7900	3.4747	4.1575	4.9012
2	10	18	08	1.2430	1.9538	2.6902	3.4170	4.1172	4.7724
2	10	18	09	1.3440	2.0988	2.8167	3.5345	4.2236	4.9386
2	10	18	10	1.2590	1.9962	2.8063	3.5113	4.2021	4.9412

2	10	25	01	1.3102	1.7292	2.1102
2	10	25	02	1.4523	1.8593	2.2368
2	10	25	03	5.1888	5.5883	5.9183
2	10	25	04	0.2741	0.6661	1.0256
2	10	25	05	4.4270	4.7955	5.1055
2	10	25	06	1.0391	1.4046	1.7396
2	10	25	07	4.0589	4.4389	4.7749
2	10	25	08	1.8512	2.2652	2.6540
2	10	25	09	4.0938	4.5714	4.9524
2	10	25	10	4.0518	4.4759	4.8348

2	10	26	01	4.1793	4.4743	4.7353
2	10	26	02	4.2816	4.5656	4.8384
2	10	26	03	3.3360	3.6552	3.9060
2	10	26	04	4.2676	4.6132	4.9028
2	10	26	05	1.0152	1.3440	1.6088
2	10	26	06	4.7032	5.0662	5.3797
2	10	26	07	0.7593	1.1053	1.3783
2	10	26	08	1.2000	1.5355	1.8580
2	10	26	09	1.0976	1.4011	1.7101
2	10	26	10	1.1050	1.5205	1.8910

2	10	27	01	4.2595	4.6580	4.9455
2	10	27	02	1.2854	1.9598	2.2082
2	10	27	03	4.0861	4.8113	5.0703
2	10	27	04	1.6755	2.1125	2.3852
2	10	27	05	1.1952	1.8594	2.1360
2	10	27	06	0.9150	1.7039	1.9580
2	10	27	07	4.9054	5.5972	5.8924
2	10	27	08	4.3758	5.0460	5.2752
2	10	27	09	4.7450	5.4692	5.7314
2	10	27	10	1.6146	2.0411	2.3511

2	10	28	01	1.2359	1.6064	2.0429
2	10	28	02	4.4166	4.7766	5.1796
2	10	28	03	1.7724	2.1444	2.6706
2	10	28	04	4.9738	5.3314	5.8288
2	10	28	05	1.4303	1.7813	2.2048
2	10	28	06	4.3780	4.7480	5.2360
2	10	28	07	1.4556	1.8330	2.3892
2	10	28	08	0.6627	1.0257	1.5453
2	10	28	09	3.5496	3.9111	4.3406
2	10	28	10	4.1294	4.4834	4.9329

2	10	31	01	0.4586	1.3536	2.1686
2	10	31	02	4.4557	5.2171	6.0541
2	10	31	03	0.4727	1.2323	2.0558
2	10	31	04	4.2843	5.0556	5.8863
2	10	31	05	1.0812	1.8570	2.6499
2	10	31	06	4.7545	5.5078	6.2845
2	10	31	07	0.5306	1.3536	2.2186
2	10	31	08	4.0809	4.8711	5.6802
2	10	31	09	0.4694	1.2844	2.1374
2	10	31	10	0.6047	1.3987	2.2517

2	10	32	01	0.4310	1.3215	2.5357
2	10	32	02	0.6492	1.5761	2.8553
2	10	32	03	0.7073	1.5081	2.6235
2	10	32	04	0.4576	1.2958	2.3947
2	10	32	05	0.3912	1.1580	2.2440
2	10	32	06	0.9076	1.8088	2.9680
2	10	32	07	1.1049	1.9677	3.2133
2	10	32	08	0.7413	1.6409	2.9071
2	10	32	09	0.6918	1.6304	2.8563
2	10	32	10	0.4896	1.4451	2.7646

2	10	33	01	0.4913	1.7202	2.3778
2	10	33	02	1.1350	2.3450	3.1444
2	10	33	03	0.3366	1.5543	2.2979
2	10	33	04	0.6516	2.0472	2.7982
2	10	33	05	0.5114	1.6829	2.3569
2	10	33	06	0.7744	1.9316	2.6459
2	10	33	07	0.3853	1.7173	2.4345
2	10	33	08	0.3597	1.7325	2.4629
2	10	33	09	0.3949	1.6786	2.3948
2	10	33	10	0.5703	1.9143	2.7631

2	10	34	01	0.4870	1.4362	2.4946
2	10	34	02	0.3694	1.4338	2.4742
2	10	34	03	0.5102	1.5914	2.6798
2	10	34	04	0.5696	1.5956	2.6984
2	10	34	05	0.3001	1.2054	2.2636
2	10	34	06	0.5090	1.5734	2.6258
2	10	34	07	0.5879	1.6669	2.9474
2	10	34	08	0.6663	1.7635	2.9582
2	10	34	09	0.6174	1.6392	2.9132
2	10	34	10	0.7414	1.8295	3.0957
2	10	35	01	0.5922	1.5846	2.5542
2	10	35	02	1.0452	2.0316	3.1212
2	10	35	03	1.2358	2.2222	3.2746
2	10	35	04	0.7932	1.8372	2.8260
2	10	35	05	0.3032	1.3052	2.3539
2	10	35	06	0.7512	1.7652	2.8656
2	10	35	07	1.1085	2.1789	3.2649
2	10	35	08	0.4476	1.4376	2.4444
2	10	35	09	0.4620	1.4916	2.5740
2	10	35	10	0.5839	1.5811	2.6587
2	10	36	01	0.8446	1.8412	2.7278
2	10	36	02	0.5730	1.6136	2.5533
2	10	36	03	1.0682	2.1938	3.1178
2	10	36	04	0.9073	2.0051	2.9280
2	10	36	05	0.6792	1.7880	2.6928
2	10	36	06	0.7589	1.9757	2.9438
2	10	36	07	0.6974	1.8224	2.6978
2	10	36	08	0.5654	1.6038	2.5212
2	10	36	09	0.6696	1.7928	2.7948
2	10	36	10	0.7071	1.8315	2.8599
2	10	41	01	4.4232	4.7799	
2	10	41	02	3.7125	4.0038	
2	10	41	03	4.3348	4.6928	
2	10	41	04	4.1436	4.5231	
2	10	41	05	4.4903	4.8243	
2	10	41	06	1.2765	1.6170	
2	10	41	07	3.7898	4.0859	
2	10	41	08	3.7848	4.0962	
2	10	41	09	4.1029	4.4716	
2	10	41	10	1.3497	1.7301	

2	10	42	01	3.6315	3.9564
2	10	42	02	1.1441	1.4996
2	10	42	03	4.7543	5.0501
2	10	42	04	1.1990	1.5344
2	10	42	05	1.4106	1.6876
2	10	42	06	4.0208	4.3364
2	10	42	07	3.9221	4.2563
2	10	42	08	0.9760	1.3387
2	10	42	09	4.0097	4.3883
2	10	42	10	3.7470	4.0845
2	10	43	01	1.6654	1.9885
2	10	43	02	0.7887	1.0902
2	10	43	03	1.6868	2.0174
2	10	43	04	1.1126	1.4008
2	10	43	05	4.1576	4.4270
2	10	43	06	1.0609	1.3744
2	10	43	07	1.0037	1.2614
2	10	43	08	0.9602	1.2236
2	10	43	09	0.9549	1.2951
2	10	43	10	1.2615	1.5657
2	10	44	01	1.0964	1.2664
2	10	44	02	1.5687	1.7297
2	10	44	03	1.1194	1.3092
2	10	44	04	1.0866	1.2796
2	10	44	05	3.5787	3.7495
2	10	44	06	1.5522	1.7450
2	10	44	07	0.9830	1.1672
2	10	44	08	1.3442	1.5228
2	10	44	09	4.6522	4.8422
2	10	44	10	1.0412	1.1902
2	10	45	01	3.9206	4.0790
2	10	45	02	1.3276	1.5164
2	10	45	03	4.1976	4.3704
2	10	45	04	4.1821	4.3859
2	10	45	05	1.4523	1.6578
2	10	45	06	1.1200	1.3146
2	10	45	07	3.5450	3.7198
2	10	45	08	1.5584	1.7292
2	10	45	09	1.2625	1.4609
2	10	45	10	1.0108	1.1790

2	10	46	01	3.8003	3.9481
2	10	46	02	4.3760	4.5264
2	10	46	03	3.9134	4.1010
2	10	46	04	1.0225	1.1705
2	10	46	05	4.5830	4.7530
2	10	46	06	4.1490	4.3520
2	10	46	07	4.1500	4.3904
2	10	46	08	4.4052	4.5660
2	10	46	09	4.0055	4.1555
2	10	46	10	3.6995	3.8401

2	10	47	01	4.5579	4.9770
2	10	47	02	4.3959	4.8717
2	10	47	03	4.4828	5.0080
2	10	47	04	1.5954	2.1034
2	10	47	05	1.0046	1.4458
2	10	47	06	4.7372	5.2370
2	10	47	07	4.2552	4.7180
2	10	47	08	0.9057	1.3494
2	10	47	09	4.3285	4.8493
2	10	47	10	3.7680	4.2342

2	10	48	01	0.9364	1.1678
2	10	48	02	4.4682	4.7523
2	10	48	03	0.9672	1.2436
2	10	48	04	1.0050	1.2348
2	10	48	05	3.5500	3.8168
2	10	48	06	0.9870	1.2534
2	10	48	07	1.0364	1.3376
2	10	48	08	3.6584	3.9142
2	10	48	09	0.7415	1.0424
2	10	48	10	0.8456	1.1441

2	10	49	01	4.2838	4.5380
2	10	49	02	0.9439	1.2001
2	10	49	03	5.0500	5.3022
2	10	49	04	3.9408	4.2046
2	10	49	05	0.6613	0.9394
2	10	49	06	4.0034	4.2580
2	10	49	07	0.8380	1.0816
2	10	49	08	0.6866	0.9400
2	10	49	09	3.9707	4.2371
2	10	49	10	0.5655	0.8625

2	10	50	01	0.8318	1.0436
2	10	50	02	0.5978	0.8506
2	10	50	03	1.2728	1.4882
2	10	50	04	0.5484	0.8169
2	10	50	05	3.8070	4.0602
2	10	50	06	0.6684	0.9566
2	10	50	07	3.8488	4.1128
2	10	50	08	3.3432	3.5880
2	10	50	09	0.6266	0.8414
2	10	50	10	3.7075	3.9886
2	10	51	01	1.4276	1.5964
2	10	51	02	4.3125	4.4772
2	10	51	03	3.9417	4.1454
2	10	51	04	4.0290	4.2096
2	10	51	05	3.2348	3.4130
2	10	51	06	1.2816	1.4526
2	10	51	07	3.5310	3.7138
2	10	51	08	1.1756	1.3426
2	10	51	09	1.1779	1.3457
2	10	51	10	1.1004	1.2924
2	10	52	01	3.7624	3.9316
2	10	52	02	4.3820	4.5086
2	10	52	03	1.3284	1.5122
2	10	52	04	0.8238	0.9859
2	10	52	05	0.7238	0.8562
2	10	52	06	4.1686	4.3134
2	10	52	07	1.1419	1.2874
2	10	52	08	1.3421	1.4991
2	10	52	09	3.8321	3.9739
2	10	52	10	2.4354	2.5888
2	10	53	01	1.7412	1.8526
2	10	53	02	1.5222	1.6598
2	10	53	03	1.2754	1.4106
2	10	53	04	3.4331	3.5711
2	10	53	05	0.8938	1.0280
2	10	53	06	3.8446	3.9704
2	10	53	07	4.2258	4.3332
2	10	53	08	4.1810	4.3196
2	10	53	09	3.6792	3.8002
2	10	53	10	3.6800	3.8082

Appendix B

Summary of Results

sig @ .05 level

<u>Rate</u>

	t-statistic											ANOVA	
	M1	M2	M3	M4	M5	SD1	SD2	SD3	SD4	SD5		M	SD
/ba/ 60	No	No	No	No	No	No	Yes	Yes	No	No	N	Yes	No
											S	No	Yes
/ba/ 80	No	No	No	No	No	No	No	No	No	No	N	Yes	No
											S	No	No
/ba ba ba/ (slow)	No	No				No	No				N	No	No
											S	Yes	No
/ba ba ba/ (fast)	No	No				No	No				N	No	No
											S	Yes	No
Bob beat Bill.(slow)	No	No				No	No				N	Yes	No
											S	Yes	No
Bob beat Bill.(fast)	No	No				No	No				N	Yes	No
											S	Yes	Yes

<u>Stress</u>

	t-statistic					ANOVA	
/'ba ba ba/	No	No	No	No	N	Yes	Yes
					S	Yes	Yes
/ba 'ba ba/	No	No	No	No	N	Yes	Yes
					S	Yes	No
'Bob beat Bill.	No	No	No	No	N	Yes	Yes
					S	Yes	Yes
Bob 'beat Bill.	Yes	No	No	No	N	No	Yes
					S	No	No

<u>Phonetic Complexity</u>

	t-statistic										ANOVA		
	M1	M2	M3	M4	M5	SD1	SD2	SD3	SD4	SD5		M	SD
/bæd/	No	No	No	No	No	Yes	No	Yes	No	No	N	Yes	No
											S	No	No
/bræd/	No	No	No	No	No	No	No	No	No	No	N	Yes	No
											S	Yes	No
/bæd bræd/	No	No	No	No	No	Yes	Yes	No	Yes	No	N	Yes	No
											S	Yes	No
/sIt/	No					No							
/spIt/		No					No						
/splIt/			No					Yes					
stick	No					No							
sticky		No					No						
stickily			No					No					
tick	No					No							
ticker		No					No						
tickertape			No					No					
con	No					No							
constitute		No					No						
constitution			No					No					
constitutionality				No					No				
Bob and Becky ate peanut butter.	No	No				No	No				N	Yes	No
											S	Yes	No
Barry and Christopher bought candy.	No	No				No	Yes				N	Yes	No
											S	Yes	No
Christopher can dunk the basketball.	No	No				No	No				N	Yes	No
											S	Yes	No
Bob and Becky ate peanut butter. (reiterative)	No	No				No	No				N	No	No
											S	No	No
Barry and Christopher bought candy. (reiterative)	No	No				Yes	Yes				N	Yes	No
											S	No	No
Christopher can dunk the basketball. (reiterative)	No	No				No	No				N	Yes	No
											S	Yes	No

<u>Relative Timing</u>

	t-statistic	
	M1/M2	SD1/SD2
/ba ba ba/ (slow)	No	Yes
/ba ba ba/ (fast)	No	No
/'ba ba ba/	No	No
/ba 'ba ba/	No	No
Bob and Becky ate peanut butter.	No	No
Barry and Christopher bought candy.	No	No
Christopher can dunk the basketball.	No	No
Bob and Becky ate peanut butter.(reit.)	No	No
Barry and Christopher bought candy.(reit.)	No	No
Christopher can dunk the basketball.(reit.)	Yes	No
Bob beat Bill. (slow)	No	Yes
Bob beat Bill. (fast)	Yes	Yes
'Bob beat Bill.	No	No
Bob 'beat Bill.	No	No

Vita

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Education

University of Southwestern LA Lafayette, LA	B.A. Psychology	1967
University of Southeastern LA Hammond, LA	Graduate Study Deaf Education	1971-72
Bradley University Peoria, IL	M.S. Audiology	1974
Louisiana State University Baton Rouge, LA	Ph.D. Speech Pathology	1988

Dissertation director: Paul R. Hoffman
Title of Dissertation: Constancy of (Acoustic) Relative Timing Measures in the Fluent Utterances of Stutterers and Nonstutterers

Professional/Teaching Experience

Speech Pathology Consultant

State of LA
Greenwell Springs Hospital
P. O. Box 549
Greenwell Springs, LA 70739
March 1983 - Present

Screen/evaluate speech/language/hearing of and provide appropriate therapy for emotionally disturbed, behavior disordered, and/or drug dependent adolescents and monitor the hearing of adult tuberculosis patients. Consult with medical and professional staff and participate with treatment team as needed.

Speech Pathology Consultant

State of LA
Earl K. Long Hospital
5825 Airline Highway
Baton Rouge, LA 70812
January 1981-February 1983

Screened/evaluated speech/language/hearing of and provided appropriate therapy for pediatric patients in continuity of care clinic adult patients on referral. Trained pediatric residents to recognize speech/ language hearing disorders and consulted with medical teaching staff as needed.

Graduate Assistant

LA State University
Communication Disorders
January - December 1980
September -December 1983

Taught Speech/Language/Hearing survey course

Instructor and Coordinator of the Preschool Deaf Class

University of Alabama
Speech and Hearing Center
and Tuscaloosa County Schools
Tuscaloosa, Alabama
September 1976 - May 1979

Taught pre-school and elementary deaf/hard of hearing total communication classes and supervised undergraduate and graduate students in speech pathology, audiology, education of the hearing impaired.

Speech Pathologist

Mid-Central School System
Hearing Impaired Division
Sterling School
Peoria, Illinois
September 1975 - May 1976

Provided speech training to deaf/hard of hearing pre-school through elementary students.

Deaf Educator

LA State School for the Deaf
Primary Department
Baton Rouge, LA
September 1970 - May 1972
January 1967 - May 1967

Classroom teacher - Visible English Method

Social Worker — LA State Department of Public Welfare
East Baton Rouge Parish
Baton Rouge, LA
August 1967-December 1969
Caseload and Intake Worker

Professional Societies (* current)

American Speech, Language, and Hearing Association *
Council on Education of the Deaf
HEAR, Peoria, IL
Phi Kappa Phi *

Certifications (* current)

Alabama Teacher's Certificate (hearing impaired, speech pathology)
American Speech, Language, and Hearing Association (speech) *
Council on Education of the Deaf (speech)
Illinois Teacher's Certificate (speech/language, deaf ed.)
Louisiana Board of Examiners for Speech Pathology and Audiology (speech) *
Louisiana Teacher's Certificate (hearing impaired)

DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Phoebe Cooper Weaver

Major Field: Speech Speech Pathology

Title of Dissertation: Constancy of (Acoustic) Relative Timing Measures In The Fluent Utterances of Stutterers and Nonstutterers.

Approved:

Paul R. Hoffman
Major Professor and Chairman

F. Glen Hegenbry
Dean of the Graduate School

EXAMINING COMMITTEE:

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Date of Examination: