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UNIVERSITY OF ALBERTA

SELECTED ANTHROPOMETRIC, PHYSICAL FITNESS, AND LIFESTYLE CHARACTERISTICS OF SENIORS GAMES PARTICIPANTS

BY

DONNA GARDECKI

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

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ENTITLED SELECTED ANTHROPOMETRIC, PHYSICAL FITNESS AND QUESTIONNAIRE DATA OF SENIORS GAMES PARTICIPANTS

SUBMITTED BY DONNA L. GARDECKI

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF SCIENCE IN EXERCISE PHYSIOLOGY

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DATE: APRIL 26, 1991

To my parents, Ed and Monique

for always believing in me.

ABSTRACT

One hundred and eight male and eighty one female participants from the 1986 Alberta Seniors Games were randomly selected to be involved in a study to collect anthropometric and physical fitness data as well as questionnaire data. The objectives of the study were to look at the differences in physical fitness and anthropometric measures between the various age categories for both sexes and to study the relationships between variables. Also the relationships between groups as determined by the questionnaire results was the final area of focus.

The anthropometric measures that were studied included mean height, weight, body mass index, sum of three skinfolds and percent body fat. Predicted $V0_2max$, pre-exercise heartrate, combined grip strength, flexibility, pushups and situps were the physical fitness measures that were studied. The questionnaire data included information on smoking habits, daily activity patterns, perceived levels of energy throughout the day, and perceived levels of fitness relative to similar individuals. Comparisons were made between most and least active individuals and also more and less fit individuals as determined by the cardiovascular performance test performed during the physical fitness testing.

A two way analysis of variance statistically determined significant differences between age groups and sexes for the mean anthropometric measures and physical fitness measures.

A Pearson Product Moment Correlation determined the relationships between body mass index, age, lean body weight, forearm circumference, combined grip strength, weight and sum of three skinfolds. The Chi Square technique was used to study the relationship between groups as determined by the questionnaire results.

The results were reported and based on the observations and others reported in the literature, conclusions were made that had implications for a relationship between activity patterns, fitness, and health.

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I would like to thank my committee members, Professor Patricia Conger and Dr. Janice James for their comments and involvement.

Thanks to John, my friend and "teacher", for his quiet and persistent confidence in me.

Finally, my deepest gratitude to a most helpful and understanding husband, Ray, for his encouragement and never-ending support through those most difficult times.

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Aging is not uniform and no obvious measure of biological age can substitute for calendar time as a context for aging (Fozard et. al., 1990). The general deterioration of bodily systems with age has been shown more consistently in inactive than active populations (Kallaman et. al., 1990; Payton and Poland, 1983). Many studies have shown a decrease in functional fitness with age (Holloszy, 1986; Health et. al., 1981) a loss of lean body mass and muscle strength (Forbes, 1976; Pearson et. al., 1985; Kallaman et. al., 1990), a loss of flexibility (Fitzgerald et. al., 1983; Einkauf et. al., 1987), and a degenerative change in overall body composition (Shephard, 1987; Borkan et. al., 1983). Other studies have shown moderation in the rate of change of these variables with regular activity (Sidney, Shephard and Harrison, 1977).

This descriptive analysis is a secondary analysis of data collected by Patricia Conger and Sandy O'Brien of the University of Alberta in Edmonton, Alberta. The original data included 189 male and female participants at the 1986 Alberta Seniors Games and included the ages of 52 to 84. Three age groups were designated to be: 50-59, 60-69 and 70+. Each participant was also classified as being least, mid or most active relative to the event that they were participating in at the games. Fifty three anthropometric and physical fitness measures were taken and questionnaire

data containing lifestyle information was also collected. This study was organized to analyze and describe selected variables as they related to age, sex and activity level. Throughout the study, mean values were compared to normative data on similar age groups.

Statement of the Problem

The study was designed to investigate certain characteristics of male and female participants aged 52-84 in the 1986 Alberta Seniors Games. Data was collected on anthropometric measures, physical fitness levels as well as responses to a lifestyle questionnaire. The study had as its main thrust the following approaches.

1. To analyze the differences in anthropometric and physical fitness measures between the various age categories for both sexes.

2. To analyze, by means of correlation techniques, the relationship between selected variables.

3. To analyze, by means of Chi square technique, the relationship between groupings as determined by the questionnaire results.

Justification of the Study

Traditionally, aging was perceived to be synonymous with deterioration and increased dependence on external means for daily living. Opportunities for growth and development were simply not available since old age was viewed as a time for declining capacities. Attitudes are changing, due in part to

research on the processes of aging. This study was part of the ongoing need to find out more about the biological changes that occur with age. Looking at an active population like a random sample of competitors from the participants of the Alberta Seniors Games gives a better understanding of the mental and physical wellbeing of a moderately active population which can then be compared to sedentary individuals of the same ages and sex. Information gained from this descriptive study has practical value for educators in both physical and mental disciplines.

Delimitations of the Study

One hundred and eighty nine (189) participants from the 1986 Alberta Seniors Games, aged 52-84 participated voluntarily in this study.

Limitations of the Study

The study was limited by the following:

1. A lack of direct personal involvement with the procedures and protocol used for data collection.

2. Only those participants who were in the events subjectively classified as most, mid and least active were given equal chance of being selected for the study.

3. If the Seniors did not qualify for their first-

choice event in the games, they could apply to participate in any other event available. This limitation means that if someone did not qualify in a most active event such as track and field, they could apply and compete in cribbage or some other "least active" event. Because analyses were done between most and least active participants, the results may be biased due to stronger and more fit people categorized as "least active".

4. The size of the sample in the 50-59 groups was only 16 men and 12 women. The females in the 70+ age group number only 20.

5. The variables that register "0" for physical fitness measures may mean either that the subject could not perform any repetitions or for some other health related reason, was not allowed to. This would affect the means for those scores.

6. The cross-sectional design does not account for direct measurements of age changes and does not specify magnitude or rate of change for individuals.

Definition of Terms

OUTLIER

A piece of data that lies so far away from the mean that it may influence the mean in a way that is not characteristic of the remaining data.

CSTF

This is an abbreviation for "The Canadian Standardized Test of Fitness" which is a program developed by the Canadian Association of Sport Sciences and Fitness Canada to evaluate physical fitness of Canadians and to encourage active and healthy lifestyles. (Fitness Canada, 1987).

BIRTH COHORT

A birth cohort consists of individuals born in the same arbitrarily chosen interval of time. Since specific environmental conditions occur at different ages for subjects from different birth cohorts, the effects of such events may be confounded with the effects of aging in their influence on cross-sectional measurements. (Shock, 1984)

AEROBIC FITNESS CATEGORY

This refers to the fitness categories that the CSTF has chosen to relate to the final heartrate score achieved in the stepping test. A score of 1 means excellent relative to a percentile ranking of all population scores. A score of 2 means above average and so on to a score of 5 which is poor relative to the population tested. This information was necessary for the Chi Square analyses.

PERCEIVED LEVEL OF FITNESS

This refers to question 90 of the coded questionnaire data (Appendix C-2), that asks the subject the following, "Comparing yourself to others your own age, would you say that you are as fit, less fit, or more fit?"

ACTIVITY STATUS

This refers to question 66 of the coded questionnaire data (Appendix C-2) and asks the subject what their usual activity status is: sleeping and resting; mostly sitting with some standing activity and little walking; mostly standing with some walking and a few vigorous activities, etc..

PERCEIVED DAILY LEVEL OF ENERGY

This refers to question 106 of the coded questionnaire data (Appendix C-2) and asks the subject: Do you feel energetic often, occasionally or rarely?

LITERATURE REVIEW

Anthropometric measures

Sex differences in mean height are well documented and show that women are consistently shorter than men in most age groups. This significant difference endures past the age of 60 (Pearson, 1985).

Aging is associated with a decrease in stature due to compression of the vertebral discs and increasing kyphosis of the spine (Shephard, 1987). In a cross sectional study by Shephard and Brown (1968, cited in Shephard, 1987), Toronto men showed a decrease in average height from 175.3 cm at age 18 to 170.2 cm at age 54. In a group of Eskimos, (Rode and Shephard cited in Shephard, 1987) the average height change was 166.7 at age 25 to 163.4 cm at age 45 and in a small sample surviving to 55, the average measure was 164.3. These results were attributed to a "secular trend" due to better living conditions and improvements in diet.

Astrand (1960) observed an average 6 cm loss in height for women from age 20-29 to ages 50-65. These measures showed the greatest decrease in height (4 cm) occurring between the 40-49 and the 50-65 age groups.

The normative data associated with Canadian Standardized Test of Fitness (CSTF) show 50th percentile values for men of 172cm and 170cm for the 50-59 and 60-69 age groups respectively. For the same age groups for women, 50th percentile norms are 160cm and 156cm. For those age groups

20-29 through 60-69, there is a 6cm and 7cm loss in mean height for men and women respectively.

The cross sectional results for average values for height of subjects from the Baltimore Longitudinal Study of Aging (BLSA) showed a gradual reduction in height over the age span of 30-80 (Shock, 1987 from the Handbook on Aging, 1985). When longitudinal serial observations were made of height, age changes in height followed a similar pattern of reduction from 30-90 years. Borkan et al. (1983), in a study of body composition and aging with 41 men between the ages of 41 and 76, found the slightly shorter height of older men was consistent with the combined effects of generational trends in stature and age-related shrinkage.

Buchi in 1950 studied 6 cohorts of men for 9 years each (cited in Shephard, 1987). Between ages 20-29, there was an increase of .5 cm and between ages 30-45, height remained unchanged and after age 45, it declined sharply.

Miall et al. (1967, cited in Shephard, 1987) showed similar results with a study looking at men and women from two separate populations - one from Vale and one from Rhondda Fach. Height was shown to remain relatively constant to age 40 but after that to the age of 70, it declined rapidly with the Vale men and women losing 1.7 cm and 3.5 cm respectively relative to age 25. The Rhondda men and women lost 3.6 cm and 4.3 cm respectively. The authors attributed the sex differences to a greater tendency toward osteoporosis in

women.

Hult (1954, cited in Shephard, 1987) found a progressive increase in both the symptoms and radiographic signs of upper and lower back disorders over the span of working life. Lawrence, DeGraff and Laine (1963, cited in Shephard, 1987) provided a survey of men and women aged 65-74 years showing 87 percent of males and 74 percent of females with radiographic evidence of cervical disc degeneration. In the same survey, 60 percent of the men and 44 percent of the women over the age of 35 showed degeneration of the lumbar discs, the condition being particularly common in manual workers.

Cross sectional studies have shown that the size, shape and proportions of the human body change throughout life. Forbes (1976), in a longitudinal study on the adult decline in lean body mass showed that the observed decline in the older population of the size of lean body mass (LBM) shown through several cross sectional studies in the literature, is a natural aging phenomenon. Forbes showed that LBM estimated by K-40 counting declined in 13 of 21 subjects measured over several years. The subjects ranged in age from 22 to 57 years of age. No statistically significant difference was shown for sex. Although some subjects showed a decrease in LBM, their weight increased or remained the same indicating an increase in body fat with aging. Brozek (1952) showed body composition changes with age such as decreases in water,

cell mass, and bone mineral content resulting in decreased density. Consequently, the aged individual who remains the same weight or gains weight may have accumulated adipose tissue.

Borkan et al. (1983) investigated and measured directly the areas of fat and muscle in selected anatomical cross-sections using computed tomography. They suggested that there appears to be increasing "internalization" of fat with age with this internalization of fat being most evident in the abdomen where there was decreased subcutaneous fat and correspondingly greater intra-abdominal fat in the elderly men. They used the computed tomography method for their measures of the deposition of internal adipose tissue. The subjects were 21 middle aged men with an average age of 46.3 years and 20 older men with an average age of 69.4 years.

Shimokata et al (1989) in a study on the effects of age, sex and obesity on distribution of body fat found, in general, that there was a progressive trend towards increasing upper and central body fat deposition with age. With women, there seemed to be a post-menopausal acceleration of this trend. They studied 771 men and 408 women aged 17 to 96 years.

In a study using both longitudinal and cross sectional methods (Borkan and Norris, 1977) changes in subcutaneous fat distribution in relation to changes in other body

compartments were studied. Cross-sectional analysis showed the average weight of the subjects to decline steadily after age 30 and the proportion of fat in relation to body weight increased with age. Longitudinal analysis on a sample population aged 20-92 showed decrements in weight between the ages of 55 and 74 with the oldest individuals in the sample showing a marked increase in weight attributed to differential survival that results in unusually good health in very old individuals.

Skinfold thickness is valuable in determining the redistribution of fat deposition with aging. Averaging 7-10 skinfold measures showed a 25 percent gain for men and a 51 percent gain for women between the ages of 25 and 65 years. The women in the study showed a particularly large deposition of fat on the lower body, mainly the hips and thighs (Kissebah et al., 1982; Krotkiewski et al., 1983, cited in Shephards, 1987). It was also shown that men's accumulation of fat was directed to the lower part of the abdomen.

Vir and Lowe (1980) in a study on the anthropometric measurements in the elderly found that abdominal circumference increased significantly with body weight in all of the 4 groups measured. The 129 subjects were both men and women living in a variety of institutionalised and non-institutionalised settings. The mean age range for all groups was 77 years old to 85 years old. Correlation of abdominal circumference with body weight was significant in

all the groups. It has been suggested that this increase in abdominal circumference is due to the fat accumulation intra-abdominally rather than subcutaneously.

Shimokata et al., (1989) in their study of 771 men and 408 women aged 17-96 showed a very large sex difference in the distribution values for the skinfold ratio. In men, the major age effect occurred between young (19-39 years) and middle age (40-54 years) and from middle to old age (55-69 years) a further small increase was present. The age trend toward higher skinfold ratios was reversed in the very old group (70-96 years). In women, the age differences were small. Waist circumference increased in men from age 20 to 50 and was then constant; in women the major increase occurred from age 40 to 70.

Muscular Strength and Endurance

The decline of grip strength with age has been previously reported and has often been attributed to declining muscle mass in older subjects.

Kallman, Plato and Tobin (1990), studied the role of muscle loss in the aged-related decline in grip strength using cross sectional and longitudinal perspectives. They found, in both types of studies, that there was a gradual decline of grip strength with age. The 864 subjects were studied over a period of 13 years and data was collected at one and two year intervals on apparently healthy subjects.

For the cross sectional study, they found the sum of bilateral grip strength to have the highest value in 30-39 year olds although it was not significantly different from the other age groups. Grip strength declined in 40-49 year olds and became progressively lower at an accelerating rate until the 80-89 year olds showed a 37% less grip strength than 30-39 year olds. The longitudinal results showed a similar trend except that 29% of individuals 40-59 years old and 15% of individuals older than 60 had no decline in grip strength during the study period.

In another cross sectional study that examined the effects of age on muscle strength and anthropometric indices within a group of elderly men and women (Pearson, Bassey and Bendall,1985) a significant negative correlation between strength of the triceps surae and biceps brachii muscle groups and age was found. Females were also consistently less strong than the men throughout. Within the 184 subjects aged 65-90, 100 were females with a mean age of 73 +-0.5 and 84 males with a mean age of 71 +-0.5. The strength of the calf in relation to body weight declined with age in both sexes. Since a decline in the ratio of strength to body weight was expected to occur as the body weight increased, a multiple regression analysis was done. For calf strength per cross-sectional area, age was the only significant variable with its effects being negative. For females in this study, there was an absence of decline with age in muscle area.

This was attributed to the differential deposition of adipose tissue between men and women causing the muscle area not to change but the suspected composition of the triceps surae to change with age. This would explain the decrease in strength for women without a coincidental decrease in muscle area measured externally.

Normal grip strength for 450 men and women aged 21-65 was established over a 5 year intervals by Thorngren and Werner (1979) using the Martin Vigorimeter. The authors found a decreasing grip strength with increasing age and that men were stronger than women on average. Mean grip strengths were determined for the 5 years with this value based on 25 determinations. Plotting these means shows a general decline between age groups however, between the ages of 45 and 55, no drop in mean occurred indicating that the individuals retained their grip through this age range. This is similar to the result found by Kallman, Plato, and Tobin in that 29% of individuals aged 40-59 had no decline in grip strength measures.

Martin, Neale and Elia (1984) studied the effects of non-nutritional factors on muscle function defined by maximal voluntary grip strength. In a relatively small sample of 35 normal subjects whose age ranged from 18 to 70 they assessed age, weight, and height as it related to grip strength performance. Although no significant change in muscle area or grip strength with age was noted, the ratio of grip

strength to forearm muscle area declined with age in both men and women. The authors suggested several possible explanations for the decrease including deterioration in muscle function with age, changes in the compressibility, composition and distribution of tissues in the forearm and possible decrease in volition of the subjects affecting neuromuscular functions.

MacLennan et al. (1980) measured fat-free mass (FFM) and grip strength in 158 men and 112 women of 65 years and over who were living at home. Converting from a sum of skinfolds to percent body fat using Durnin and Womersley's calculations they were able to relate percent body fat to total body weight and calculate fat-free mass (FFM). They measured grip strength with the Meredith dynamometer and found a sharp decline in grip strength with increasing age in both men and women however only a marginal decline in FFM was noted to be not significant. Multiple regression showed there to be an age effect on grip strength independent of FFM. Fibrous tissue is suggested as the possible explanation for these results being that an increasing proportion of skeletal muscle is replaced by fibrous tissue with age. No references to support this claim were given.

Larsson, Sjodin and Karlsson (1978) studied 55 healthy sedentary volunteers aged 22-65 years in terms of histochemical and biochemical changes in human skeletal muscle with age. They found metabolic changes in aging

vastus lateralis muscle in the form of an increasing percentage of Type I ("slow twitch") fibers, a selective Type II ("fast twitch") fibre atrophy and a decrease in the activity of muscle specific Lactate Dehydrogenase (LDH) isozymes. They suggested these changes were possible explanations for the decrease in muscular strength found with age. They also pointed out that instead of a transformation of Type II fibers, there was an atrophy and degeneration of the same. Larsson and Karlsson (1978) found a similar result reporting the area of Type I fibres remained unchanged with age while there was a decrease in Type II fiber area. The subjects were 50 healthy men, 22-65 years of age.

Flexibility

Fitzgerald et al. (1983) did a study in an attempt to establish normal values for lumbar spinal range of motion. They measured lumbar flexion, extension and right and left lateral flexion on 172 volunteers (4 women and 168 men) from a veterans hospital by a combination of goniometry and spinal distraction techniques. Subjects were excluded from the study if they were experiencing or had a history of back pain. Normal values were given for six age groups; within the ages of 20-82, each group had a range of 10 years. They found that a trend of decreasing lumbar spine mobility existed with advancing age. Also, variability in normal range of motion generally increased for older age groups.

For lateral flexion and extension, the pattern was a significant and systematic decrease every 20 year-interval. Anterior flexion showed a significant difference only between the oldest and the youngest groups.

The active mobility of the extremities in older subjects was studied by Walker et al. (1984). Thirty men and 30 women were equally divided in two age groups of 60-69 and 75-84 years of age. Subjects with pathological conditions were excluded from the study however those with mild arthritis and other similar musculoskeletal conditions were not. In measuring shoulder, elbow, hip and knee joints with a large 360 degree goniometer, they found no significant differences between the two age groups however univariate tests revealed significant differences between men and women of these age groups.

Einkauf et al. (1987) studied the changes in spinal mobility with increasing age in women. One hundred and nine women residing in the San Francisco Bay area of the United States volunteered for the study. Six age groups from 20-29 to 70-84 were established with each group containing at least 15 subjects. The modified Schober method was used to measure anterior flexion and standard goniometry was used to measure lateral flexion and extension. The most significant differences were between the two oldest and two youngest age groups with the middle age groups not differing significantly from each other nor from the oldest age groups. The amount

of variability did not increase with age; instead, the variability seemed to decrease with age.

James and Parker (1989) studied the active and passive ranges of 10 lower limb joint motions measured with a Leighton Flexometer in 80 healthy, active men and women aged from 70 years. These subjects were recruited from lawn bowling clubs, clubs for senior citizens and retirement villages. All had maintained capacity in daily living without assistance and were either living in their own homes or in hostel type accommodations. Joint mobility, both active and passive, in these subjects declined consistently as age increased with the most rapid reduction during the ninth decade. Women were significantly more mobile than the men in 7 of the 10 motions. Hip flexion with knee in extension showed a greater variation in measurements at all ages than any other joint action. This was also the measure which declined the least with advancing age with a significant reduction in hip flexion apparent only after 85 years of age. In these subjects, observation during the test sessions showed that resistance appeared to be caused primarily by tightness in the lower back structures.

Flexibility, as measured by the modified sit and reach test as well as many other physical performance measures, was used in a study by Rikli and Busch (1986) to help in determining the motor performance of women as a function of age and physical activity level. The participants were 60

female volunteers, classified into one of four groups of 15: young active (M = 22.2 years of age); young inactive (M = 22.2 years of age); old active (M = 68.7 years of age); and old inactive (M = 68.9 years of age). Inactivity was defined as never having participated in vigorous physical activity of any type on a regular basis, either for the purpose of exercise or for occupational or other lifestyle reasons. The young active participated 3 times per week for at least 30 min a day for the past 3 years or more. The older active women had participated in vigorous activity for the past 10 years of more on a regular basis. A significant difference in the sit and reach performance was found between the younger and the older active groups. A significant difference was also found between the active and the non active older groups as well as between the active and nonactive younger group. Scores of active older women were generally more similar to younger women than to their older inactive peers.

To determine the importance of stretch and contractile activity in the prevention of connective tissue accumulation in muscle, Williams et al. (1988) investigated the effect of electrical stimulation on immobilised rabbit soleus muscle. Four groups of rabbits divided as follows: 1. the soleus muscle was immobilised in a shortened position, 2. the soleus muscle was immobilised in a shortened position and stimulated, 3. the muscle was immobilised in the stretched

position and, 4. the muscle was stimulated only. When muscles were immobilised in the shortened position, there was, an increase in the concentration of connective tissue. However, when the immobilisation was combined with stimulation, connective tissue build-up was prevented implying that lack of contractile activity was an important factor in connective tissue accumulation. These results had important implications to suggest that lack of activity may have played a role in the accumulation of connective tissue (a decrease in compliance) of aging muscle.

Trends have shown a general decline in flexibility with age with some studies showing an increase in variability while others show a decrease. Generally, activity seems to delay the rate of decline of flexibility with age.

Cardiovascular Fitness

Aging is characterized by a loss of functional capacity of the cardiovascular system. The most effective stress for determining this loss is a maximal oxygen uptake capacity test (VO_{2max}), which is normally determined by the capacity of the cardiovascular system to deliver oxygen to the working muscles and the ability of the muscles involved to utilize the oxygen (Holloszy, 1986). This test, and ones similar to it, have been used as an index of overall maximal cardiovascular functional capacity in numerous studies of the effects of aging.

Most studies have shown a rather uniform rate of decline in VO_{2max} beginning at about age 30 (Holloszy, 1986). However, cross-sectional sampling of healthy individuals of different ages provided a substantially lower rate of decline in VO_{2max} with aging than did longitudinal observations on healthy men (Bruce, 1984). If the regression line for cross-sectional sampling was extrapolated to the age at which the basal or minimal oxygen uptake was intersected, healthy persons should have been living to 110-120 years of age. Conversely, if the same was done for longitudinal data, it intersected VO_{2min} within the observed survival of healthy persons. Bruce also stated that higher VO_{2max} values were observed in men than in women, in proportion to lean body mass however, regardless of gender, higher values were found in the physically active than in sedentary persons.

Heath et al. (1981) found that in healthy men, VO_{2max} declines approximately 10 per cent per decade. Hagberg (1987) showed the ability to adapt to exercise training was retained in old age and the rate of decline in VO_{2max} with age in subjects who continued to train throughout life was only 5 per cent per decade which was only half the rate generally found in sedentary persons.

Buskirk and Hodgson (1987), in a review study found that most cross sectional studies presented a fairly uniform rate of decline in VO_{2max} with age at 0.40 to 0.50 $ml.kg^{-1}.min^{-1}.year^{-1}$ in men. In women the rate of decline appeared to be

less at approximately 0.20 to 0.35 $ml.kg^{-1}.min^{-1}.year^{-1}$. No real clear distinction in the rate of change in VO_{2max} was evident when comparing active and inactive populations. With longitudinal studies, the reported rate of decline in studies ranging from 2.5 to 56 years presented a confounding picture. The rate of decline in VO_{2max} varied from 0.04 to 1.43 $ml.kg^{-1}.min^{-1}.year^{-1}$ and there was some indication that active individuals decline at a slower rate than inactive persons but results were not uniform. Buskirk and Hodgson presented a possible explanation: Changes in VO_{2max} over the entire age range may be curvilinear, with active individuals declining slowly as long as they maintain a regular exercise program, and sedentary individuals declining at a more rapid rate during their 20's and 30's followed by a slower rate of decline of their VO_{2max} as they age further.

METHODS AND PROCEDURES

Subjects

One hundred and eighty nine male and female Seniors Games participants from regions all over Alberta were randomly selected from a subsample of the total 698 games participants. This random subsample included only those participants who were registered to compete in the events subjectively classified as most, mid and least active (Table I). The ages ranged from 52 to 84 years of age with 108 males and 81 females taking part.

Procedure

Subjects were initially screened using the ParQ questionnaire (Fitness Canada, 1987). The physical testing and anthropometric measurements were done at Grande Prairie college by Prof. Sandy O'Brien and Prof. Patricia Conger along with a trained team of 6 testers. Each tester was specially trained to measure only one category of the test protocol and this became their only function as testers during the study. For example, one person was trained to measure skinfolds on the male subjects and this person measured skinfolds on all 108 male participants. The questionnaires (Appendix A) were given to the participants at their arrival at the games and they were asked to fill them out as completely as possible. The instructions were to bring the questionnaire with them to the testing session along with

TABLE I

ACTIVITY CLASSIFICATION OF PARTICIPANTS

Most Active Males	n	Least Active Males	n
Slowpitch Softball	14	Bridge	2
Swimming	3	Cribbage	2
Tennis	2	Disking	1
Track and Field	6	Floor Curling	9
		Performing Arts	3
		Shuffleboard (table)	3
		Snooker	4
Total	25	Total	24

Most Active Females	n	Least Active Females	n
Gymnastics	4	Bridge	2
Swimming	5	Cribbage	2
Tennis	3	Disking	3
Track and Field	8	Floor Curling	4
		Performing Arts	5
		Shuffleboard (table)	3
		Snooker	2
Total	20	Total	21

Mid Active Males	n	Mid Active Females	n
Bowling		Bowling	
Golf		Golf	
Horseshoes		Horseshoes	
Dance		Dance	
Lawn Bowling		Lawn Bowling	
Orienteering		Orienteering	
Badminton		Badminton	
Carpet Bowling		Carpet Bowling	
Trapshooting		Trapshooting	
Croquet		Croquet	
Total	58		41

any questions they might have. All CSTF physical fitness and anthropometric measurements were done according to standard CSTF protocol (Appendix B). Calculations for various indexes for the physical measures were done using the software "Body Lab" (Bailey and Mirwald, Bodylab Software). The raw data (Appendix C-1) was then coded (Appendix C-2) and input into a computer for statistical analysis.

In conjunction with the Canadian Standardized Test of Fitness, normative data was established for the Canadian population up to the age of 69 for selected variables. To categorize the 70+ athletes for cardiovascular performance (to allow analysis to be performed on the data), norms were extrapolated based on recommendations from Fitness and Amateur sport that the decline in VO_{2max} is approximately 9% per decade. This information is included in Appendix D.

Statistics

The statistical program SOLO (SOLO Statistical System: Version 100, 1988) was used to calculate the following: Mean, Standard Deviation, Analysis of Variance, Newman Keuls Post Hoc Test, Chi Square and Pearson Product-Moment Correlation. The level of significance was set at .05 for all analyses.

RESULTS AND DISCUSSION

Anthropometric Measures

The means and standard deviations for selected anthropometric and physical fitness measures for both sexes according to age group are summarized in Table II. Also, included in Appendicies C-1 and C-2 are the raw scores and their coded form respectively. Mean height showed a general but not significant decline over time with age, however females were shorter than males in all age groups (Figure 1). A two way ANOVA showed a significant difference for mean height between males and females in all age groups ($p=.05$). This is consistent with other observations in the literature (Pearson et al., 1985). Although a decrease in mean height with age is shown to occur with regularity in many studies (Shephard and Brown, 1967 in Shephard, 1987;Buchi, 1950 in Shephard, 1987; Miall et. al., 1967 in Shephard, 1987), no significant decrease was apparent in this study. In fact, the subjects were taller on average than other seniors of similar age. The Canadian Standardized Test of Fitness (CSTF) normative data show men and women at the 50th percentile ranking to be 172cm and 160cm respectively in the 50-59 age group. In the 60-69 age group, the normative values are 170cm for men and 156cm for women (Table III). No CSTF normative data for the 70+ age group is available. These average values are less (except for women in the 50-59 age group) than those values shown for the Seniors Games

TABLE II

MEANS AND STANDARD DEVIATIONS FOR SELECT ANTHROPOMETRIC AND FITNESS MEASURES

AGE GROUP	50-59		60-69		70+		
SEX	M	F	M	F	M	F	F**
TOTAL SUBJECTS	16	12	52	49	40	20	18
MEAN AGE (yrs)	57.2 (1.1)	56.5 (2.0)	64.9 (2.8)	64.7 (2.9)	73.9 (4.0)	74.9 (5.0)	75.4 (4.9)
HEIGHT (cm)	174.0 (7.4)	159.5 (3.9)	173.9 (5.4)	162.0 (4.6)	172.5 (6.5)	157.0 (6.6)	157.0 (6.6)
WEIGHT (kg)	79.3 (10.0)	60.7 (8.9)	82.2 (10.5)	68.9 (11.7)	78.2 (10.9)	63.0 (9.0)	63.1 (9.5)
PRE-EXERCISE HEARTRATE (bpm)	80 (11.6)	83 (7.7)	83 (10.0)	82 (11.6)	81 (12.8)	81 (9.6)	81 (10.1)
COMBINED GRIP STRENGTH (kg)	97.2 (13.)	55.5 (6.9)	90.0 (15)	56.0 (9.7)	81.5 (13.9)	47.3 (9.8)	45.8 (9.1)
FLEXIBILITY (cm)	27.8 (8.8)	38.0 (7.0)	24.00 (11.4)	28.6 (8.7)	19.9 (11.7)	35.1 (6.4)	34.0 (5.2)
*PUSHUPS (total)	12(8.3)	17(12.7)	6(5.1)	9(8.6)	4(6.4)	11(17.0)	8(9.9)
SITUPS (total)	21(16.2)	20(20.9)	13(10.5)	6(9.0)	10(10.0)	10(20.0)	7(15.0)
BODY MASS INDEX (w/h^2)	26.1 (2.7)	23.8 (3.8)	27.2 (3.6)	26.3 (4.8)	26.2 (3.1)	25.6 (4.0)	25.8 (4.1)
SUM OF 3 SKINFOLDS (mm)	46.6 (19.3)	54.0 (17.6)	53.9 (21.3)	61.7 (21.1)	50.5 (18.8)	56.5 (15.7)	58.9 (14.5)
PERCENT BODY FAT	24.8 (6.2)	34.7 (5.0)	27.0 (6.2)	36.5 (4.6)	26.0 (6.0)	35.3 (3.6)	35.9 (3.2)
PREDICTED VO_{2max} $ml \cdot kg^{-1} \cdot min^{-1}$	29.5 (3.2)	25.0 (2.4)	23.1 (3.0)	25.5 (2.6)	20.1 (2.7)	18.5 (2.1)	N/A

* Women performed the modified pushup

**Data excludes two outliers

HEIGHT FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS

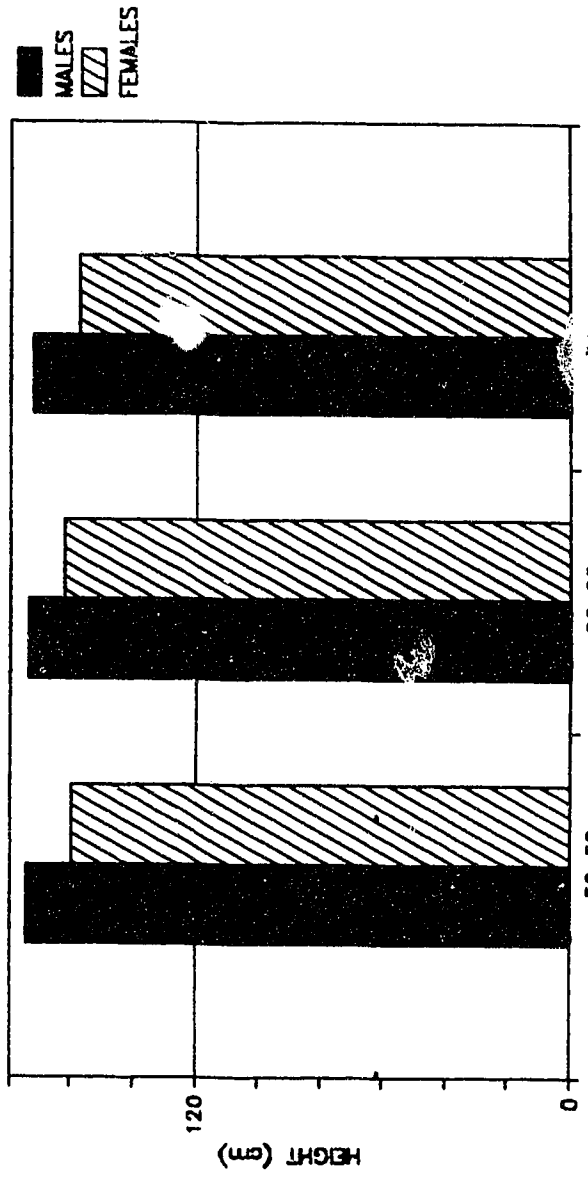


FIGURE 1

TABLE III

COMPARISON OF PRESENT DATA MEANS WITH CSTF (50th PERCENTILE) FOR VARIOUS PHYSICAL PERFORMANCE AND ANTHROPOMETRIC MEASURES

VARIABLES	50-59				60-69			
	males		females		males		females	
	Present Data	CSTF	Present Data	CSTF	Present Data	CSTF	Present Data	CSTF
BMI (w/h^2)	26	26	23	25	27	27	26	25
BODY WEIGHT (kg)	79	78	60	64	82	77	69	62
HEIGHT (cm)	174	172	160	160	174	170	162	156
VO_{2max} ($ml.kg^{-1}.min^{-1}$)	30	34	26	26	25	28	20	22
PUSHUPS	12	10	17	9	6	9	9	6
SIT AND REACH (cm)	28	25	38	30	24	22	29	27
SITUPS	21	23	20	16	13	20	6	7
GRIP STRENGTH (kg)	97	97	55	56	90	88	56	52

participants in this study. Interestingly, Astrand (1958) reported average heights for men 50-59 and 60-64 as the same or greater than those found in this study. A similar trend occurs in Astrand's work with women (1960). Shock (1984) suggested that one limitation of cross-sectional studies is that they suffer from birth-cohort effects. This is where subjects of different ages may differ in characteristics other than age that may also affect the measurements. Sixty-year old subjects in Astrand's 1960 study would have experienced very different socioeconomic conditions early in life when compared to 60-year old subjects from the 1986 Seniors Games or the 60-year old subjects that contributed data for the CSTF norms. "Epidemics, wars, and other disruptions that occur at different points of the life cycle of different birth cohorts may influence test results in ways that the cross sectional method cannot differentiate from true age changes." (Shock, in Normal Human Aging, 1984)

Dietrick et al. (1948, in Handbook of the Biology of Aging, 1985) show that bone loss is associated with immobilization in normal young men who participated in a 3 month study. Dent and Watson (1966 in Handbook of the Biology of Aging, 1985) consider that osteoporosis due to immobilization may complicate other forms and initiate a vicious circle, particularly with older people, mainly women, who become more sedentary - a situation almost certainly contributing to their bone loss. Heath et al. (1981) repor

the mean height of male masters athletes (age 50-72) to be comparable to the average heights reported for the men of similar age in this study. These masters athletes were active in age-group competition and were competitive runners when they were younger. This information suggests that an active lifestyle contributes to retaining bone mass and therefore slowing the rate of height loss in aging populations. This is supported by Lanyon's studies (1980, in Handbook of the Biology of Aging, 1985) on animals that demonstrated a fundamental relationship between bone mass and its load bearing requirements. He showed that bone mass can be increased by exposing bone to strain changes which are well within the limits of normal daily activity with frequency and not magnitude of the peak strain being most important. Mean height may be affected by secular trends (Shock, in Normal Human Aging, 1984) where nutrition, environment and daily activities can play a major role in determining the rate of height change with age and ultimately, final adult height. This is referred to by Shock as the birth cohort effect and should be considered when comparing and analysing data from a cross sectional study.

As expected, weight for various age groups showed a difference between sexes (Table II and Figure 2). A two way ANOVA found this to be significant ($p=.05$) with the men being heavier than women in all age groups. This is consistent with previous research reported in the literature (Vir and

WEIGHT FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS

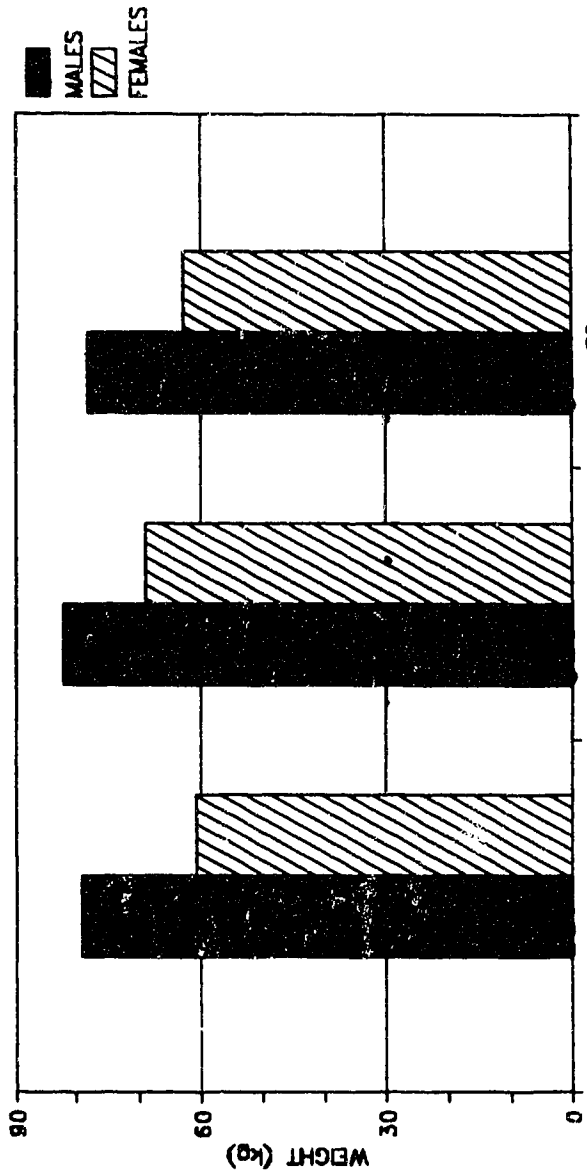


FIGURE 2

Love, 1980). Age effects for average body weight were not significant (p=.05) and no apparent trend was evident, therefore these seniors did not show a significant loss in average body weight across the age groups. Interesting to note that the correlations of weight with age were not very high but they were significant and negative for both men and women (Table IV) implying that as age increases, body weight generally tends to decrease. Both men and women showed the highest averages for body weight in the 60-69 age groups. Values observed in this study for all age groups were higher than some of those reported in the literature for seniors of similar age (Borkan et al., 1983; Blanchard et al., 1990; Shimokata, et al., 1989 and Flint et al, 1977). Conversely, Latin et al. (1987) and Heath (1981) reported average values for men and women (Sidney et al., 1977) that were comparably higher than those reported in this study. A high value for average weight could mean high LBW or body fat or both. For these seniors, mean percent body fat showed a barely perceptible trend that increased with age, however no significant difference was noted between age groups (Table II and Figure 3). Similar to the trend that occurred with body weight, the 60-69 year age groups for both men and women exhibited the highest measures of average percent body fat, sum of 3 skinfolds and Body Mass Index (Table II and Figures 3,4,5). A two-way ANOVA showed significant differences between sexes in all age groups for these measures, however

TABLE IV

CORRELATIONS BETWEEN BODY MEASUREMENTS

			2	3	4	5	6	7
1. BODY MASS INDEX (w/h^2)	ALL	N=189	-.02	.44	.59*	.14*	.79*	.46
	F	N=81	-.04	.75	.77*	.06*	.91*	.77*
	M	N=108	-.02	.51*	.70*	.10*	.85*	.77*
2. AGE (yrs)	ALL	N=189		-.01	-.13	-.18*	-.08	-.07*
	F	N=81		-.06*	-.21*	.39	-.17*	-.10*
	M	N=108		-.20*	-.30	-.40*	-.11*	.03*
3. LEAN BODY WEIGHT (kg)	ALL	N=189			.84*	.77*	.83*	-.45*
	F	N=81			.68	.28	.87*	.48
	M	N=108			.66*	.36	.79*	.14*
4. FOREARM CIRCUMFERENCE (mm)	ALL	N=189				.74*	.86*	-.16*
	F	N=81				.31*	.81	.67*
	M	N=108				.47*	.79*	.56*
5. COMBINED GRIP STRENGTH (kg)	ALL	N=189					.56*	.59*
	F	N=81					.26*	.01*
	M	N=108					.26	.05
6. WEIGHT (kg)	ALL	N=189						.09*
	F	N=81						.75*
	M	N=108						.71*
7. SUM OF 3 SKINFOLDS (mm)	ALL	N=189						
	F	N=81						
	M	N=108						

* significant at alpha=.05

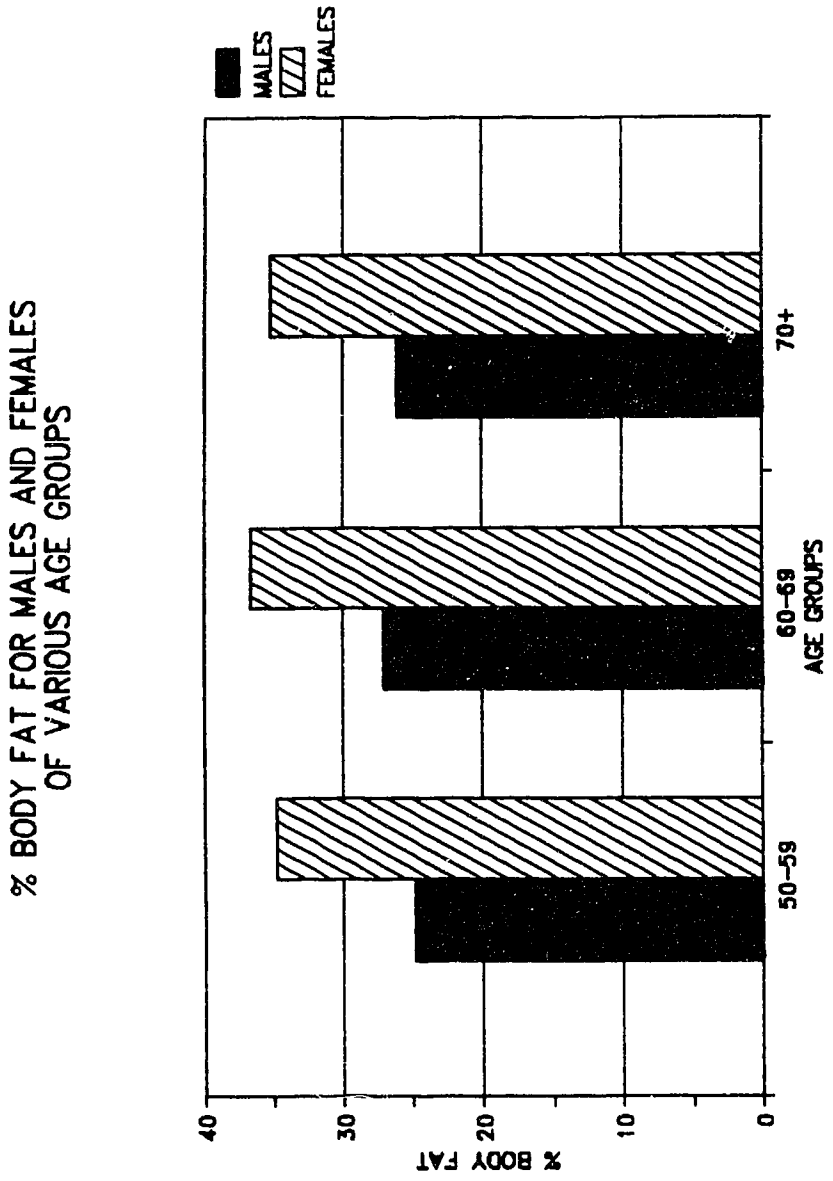

% BODY FAT FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS
MALES
FEMALES
% BODY FAT
0
10
20
30
40
50-59
60-69
70+
AGE GROUPS

FIGURE 3

SUM OF 3 SKINFOLD MEASURES FOR MALES
AND FEMALES OF VARIOUS AGE GROUPS

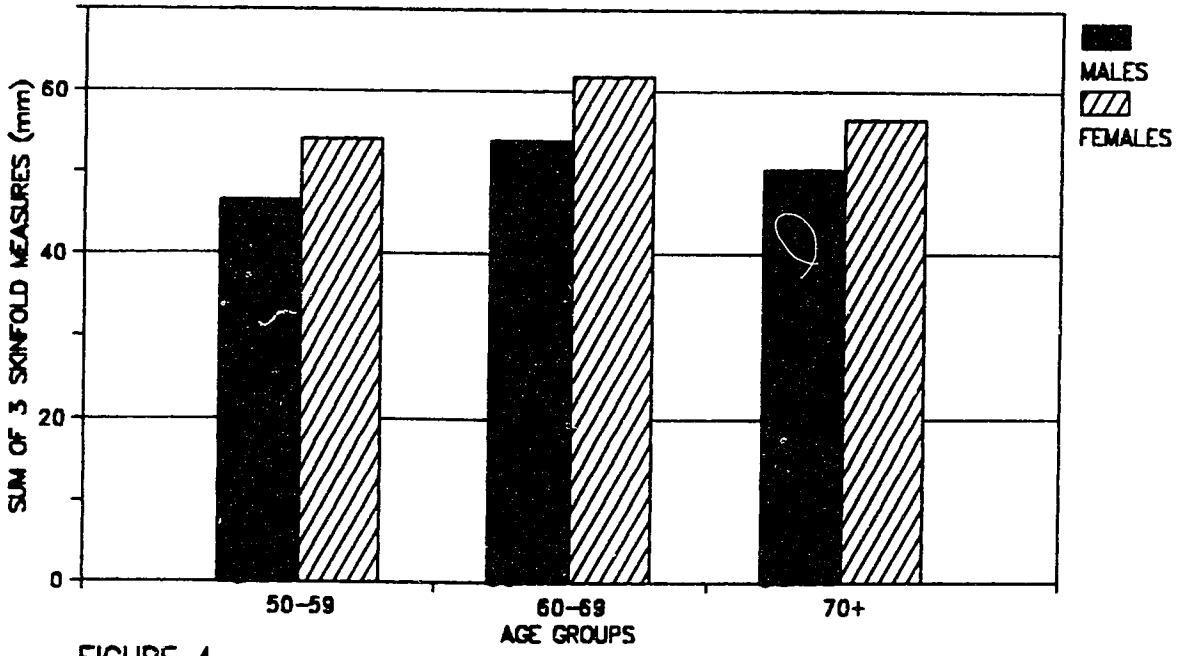


FIGURE 4

BODY MASS INDEX FOR MALES AND FEMALES OF VARIOUS AGE GROUPS

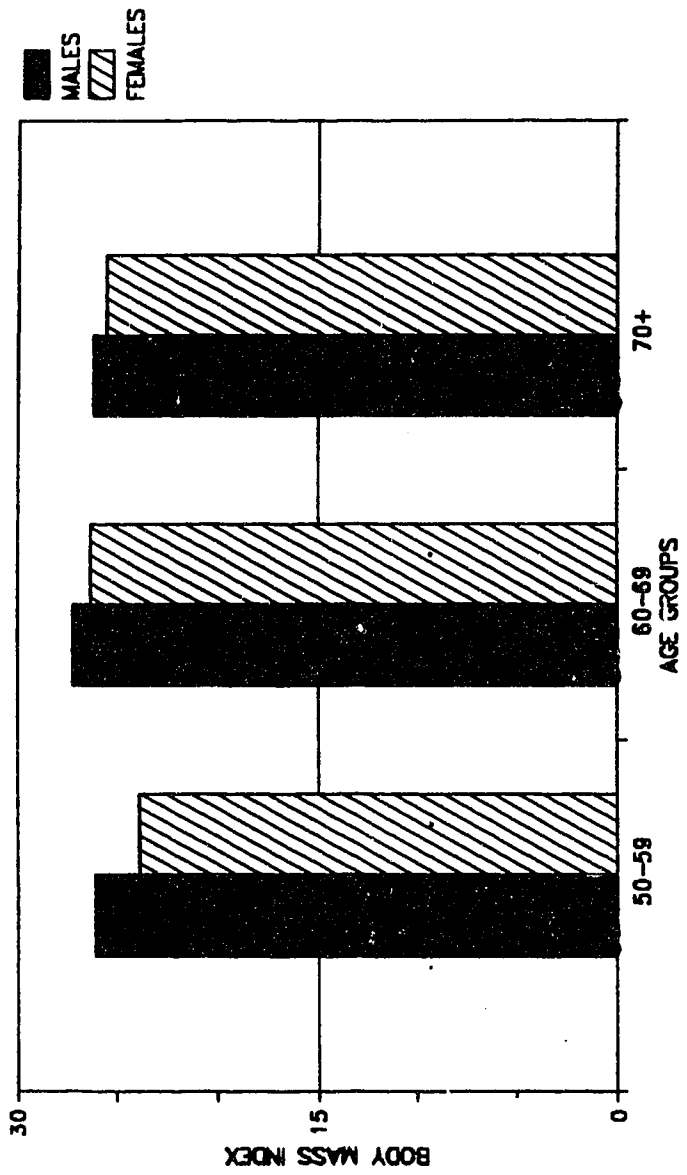


FIGURE 5

no significant effects for age were noted. Sidney et al. (1977) associated the aging process with loss of fat-free mass and tissue mass as well as a gain in body fat. The latter occurs probably into the 60s, but the gain may not be pronounced, as reflected by different increases in skin-fold thicknesses. Thereafter, body fatness may decrease (Buskirk in Handbook of the Biology of Aging, 1987). This pattern was reflected in the results of this study (Figures 6,7) although the weight gain in the 60-69 year age group is observable but not significantly different from the other age groups. When means for lean body weight (LBW) were calculated (Table V), no significant effects for age were noted ($p=.05$), however males and females were significantly different. Sum of three skinfolds showed a significant negative correlation ($r=-.45$) with LBW for all 189 participants. This implies that while sum of skinfolds is increased, LBW is decreased; a trend observed in other studies (Durnin and Womersley, 1974 and Blanchard et al., 1990). LBW had it's highest average in the 60-69 year age group. Following this into the 70+ age group, averages for men and women decreased 5% and 8% respectively relative to the previous decade. Forbes (1976) reported a faster decline in LBW for women than men, as observed in this study, especially in the later years. LBW measured and estimated by underwater weighing, decreases gradually at a rate of about 3.6 percent per decade from age 30 to 70 years (Behnke and Myhre, 1982 in Handbook on the Biology of Aging,

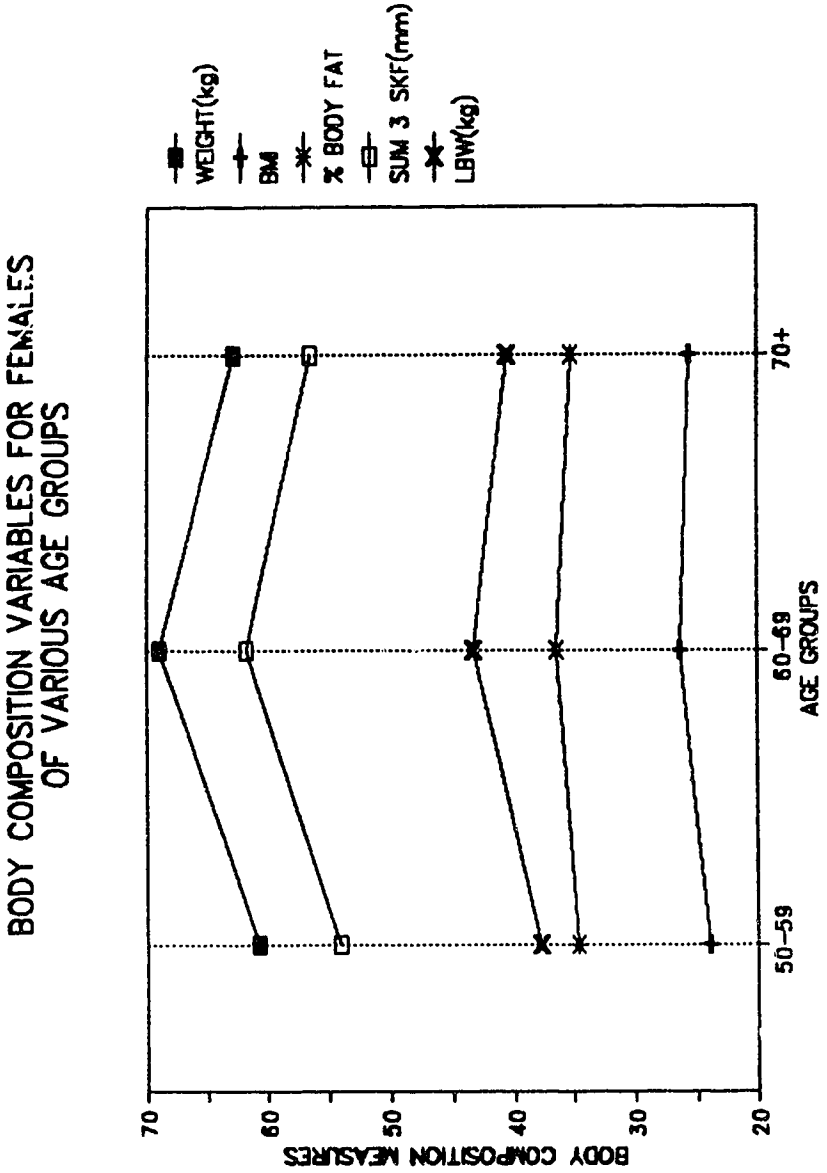

BODY COMPOSITION VARIABLES FOR FEMALES
OF VARIOUS AGE GROUPS
WEIGHT(kg)
BMI
% BODY FAT
SUM 3 SKF(mm)
LBW(kg)
BODY COMPOSITION MEASURES
70
60
50
40
30
20
50-59
60-69
70+
AGE GROUPS

FIGURE 6

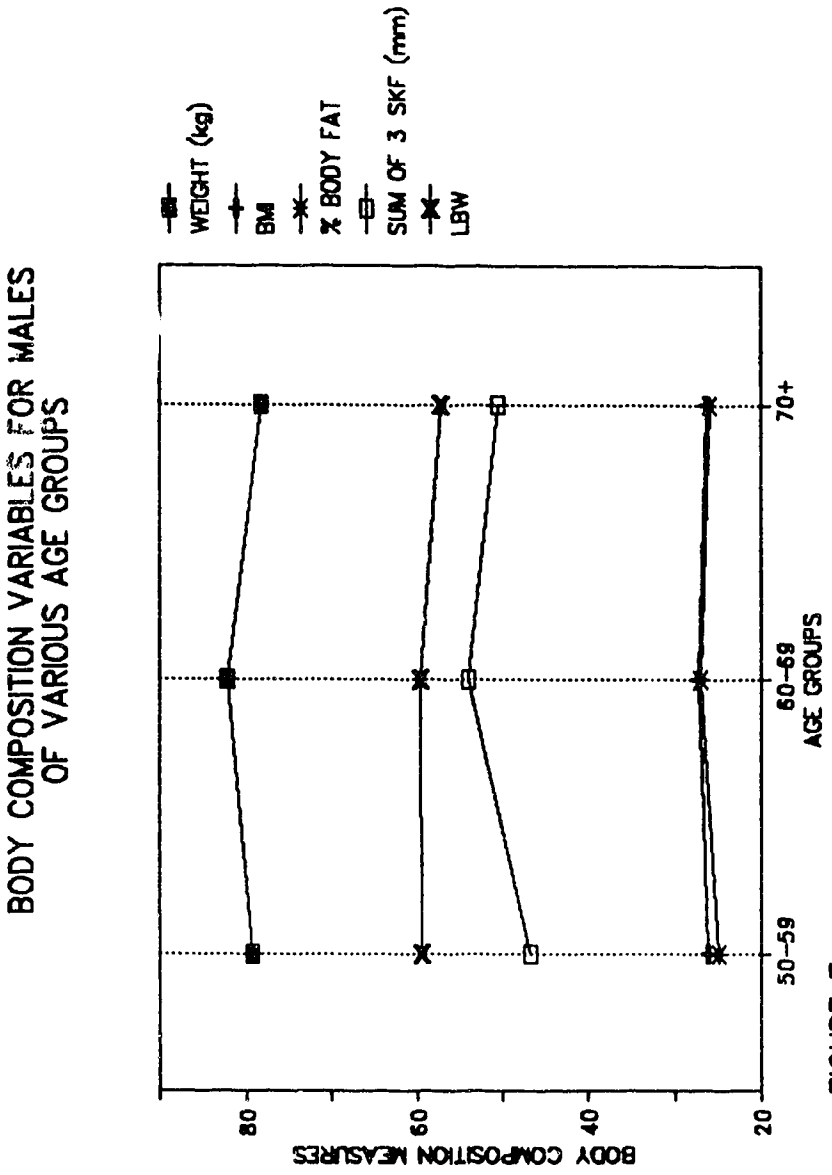

BODY COMPOSITION VARIABLES FOR MALES
OF VARIOUS AGE GROUPS
WEIGHT (kg)
BMI
% BODY FAT
SUM OF 3 SKF (mm)
LBW
BODY COMPOSITION MEASURES
80
60
40
20
50-59
60-69
70+
AGE GROUPS

FIGURE 7

TABLE V

LBW, FOREARM CIRCUMFERENCE AND GRIP STRENGTH
FOR MEN AND WOMEN OF VARIOUS AGE GROUPS*

AGE GROUP	N	SEX	BMI (w/h^2)	LBW (kg)	FOREARM GIRTH (cm)	GRIP STRENGTH (kg)
50-59	16	M	26.13 (2.7)	59.4 (7.04)	28.5 (1.0)	97.2 (13.2)
60-69	52	M	27.16 (3.6)	59.6 (4.8)	28.4 (1.7)	90.0 (15.0)
70+	40	M	26.21 (3.1)	57.3 (5.3)	27.5 (1.7)	81.5 (13.9)
50-59	12	F	23.83 (3.3)	37.8 (4.1)	24.1 (1.5)	55.5 (6.9)
60-69	49	F	26.28 (4.8)	43.3 (5.4)	25.0 (1.7)	56.0 (9.7)
70+	20	F	25.55 (3.9)	40.6 (4.9)	24.3 (1.4)	47.3 (9.8)

* parameters indicate standard deviations

1987). After age 70, the decrease is about 9 percent per decade. Normative data from the CSTF for the two youngest age groups are given in Table III. The seniors from the Seniors Games were, on average taller and heavier than average Canadians of similar age. The 60-69 age group had higher average LBW and percent body fat than other's their own age. Although the average body fat increased with age, LBW was high and not declining as quickly as reported in the literature for other people of similar age. Body Mass Index scores for the study groups were near the 50th percentile scores for the CSTF normative data (Table III) indicating a proportionality score very close to average for their age. The expectation might be that these people should have a lower body fat and body weight than average and lower BMI scores. High calculated values for LBW contribute to the above average body weight however the higher than average body fat measures are difficult to explain. One explanation could be that the Durnin and Wormersley formula used to calculated percent body fat from skinfold measures for men has been shown to overestimate percent body fat when compared to 3 other methods (Blanchard et al., 1990). Another explanation might be that the activities and lifestyle engaged in by these seniors is keeping what might be considered normal aging processes under control. This was reflected in the percentile rankings of the average values from the two youngest age groups. Although they had higher

than average body fat measures, their values were not within the risk zones associated with cardiovascular disease and other health problems (Fitness Canada, 1987).

With the anthropometric measures, the trends seemed to be consistent with most literature however differences between all age groups for all anthropometric variables failed to be significant suggesting that the rate of decline for such variables as LBW and height is slowed. Similarly where sum of skinfolds, percent body fat and weight are concerned, change in these variables with age was evident and consistent with the literature but not significant.

Muscular Strength and Endurance

Many studies have shown a decline in strength with increasing age (Kallman, et. al, 1990; Pearson, et. al., 1985; Thongren and Werner, 1979; MacLennan et. al, 1980). In this study, the best efforts from both right and left grip strength were added together to get average combined grip strength (figure 8). A two way Anova showed significant age and sex effects ($p=.05$) with the men being consistently stronger in all age groups. A post hoc Newman Keuls test determined a significant difference between the youngest age group and both of the older age groups but not between the older groups. A two way analysis of variance was performed on both the situp and pushup data. Keeping in mind that the women performed pushups from their knees, comparisons with

COMBINED GRIP STRENGTH FOR MALES AND FEMALES OF VARIOUS AGE GROUPS

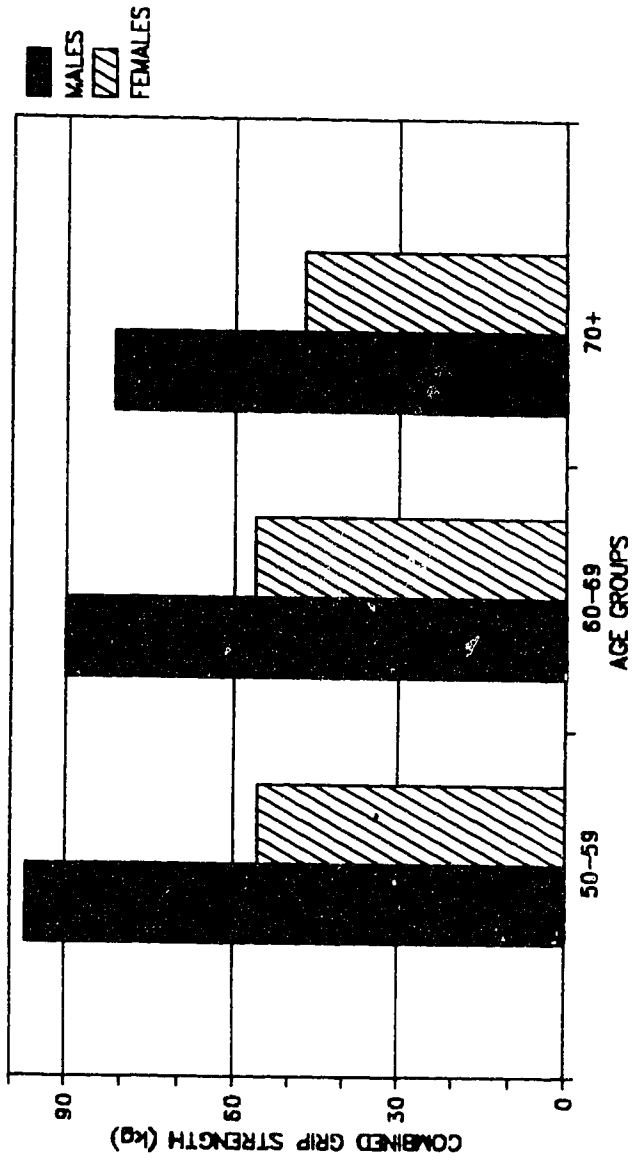


FIGURE 8

men will not be reported since two different protocols were used. For the 70+ age group for women, one outlier was removed from the analysis for pushups since she performed 40 pushups more than the next highest score below hers (table II, and figures 9, 9a). This did not change the results of the Anova finding effects for age and sex (p=.05). For the situps, a different outlier was removed from the analysis since she perform 71 situps (table II and figures 10, 10a). However, one other person in her age group and a total of five in the study performed above 50 situps. However, these men and women should be considered a valid part of this active and healthy sample. Removing the data did not change the results of the Anova showing age and sex effects (p=.05). For both pushups and situps, the significance in the age difference was determined by a post hoc Newman Keuls to be between the youngest and the two oldest groups. Negative correlations were found between age and grip strength for both men and women (Table IV). Normative data from the CSTF for the two youngest age groups shows both men and women from the Seniors Games to have the same average grip strength or more grip strength than the average Canadian of the same age (table III). Normative data from the CSTF is not available for 70+ years of age however some studies have reported strength values for this age group. Mathiowetz et. al. (1985) reports grip strength norms for 628 volunteers

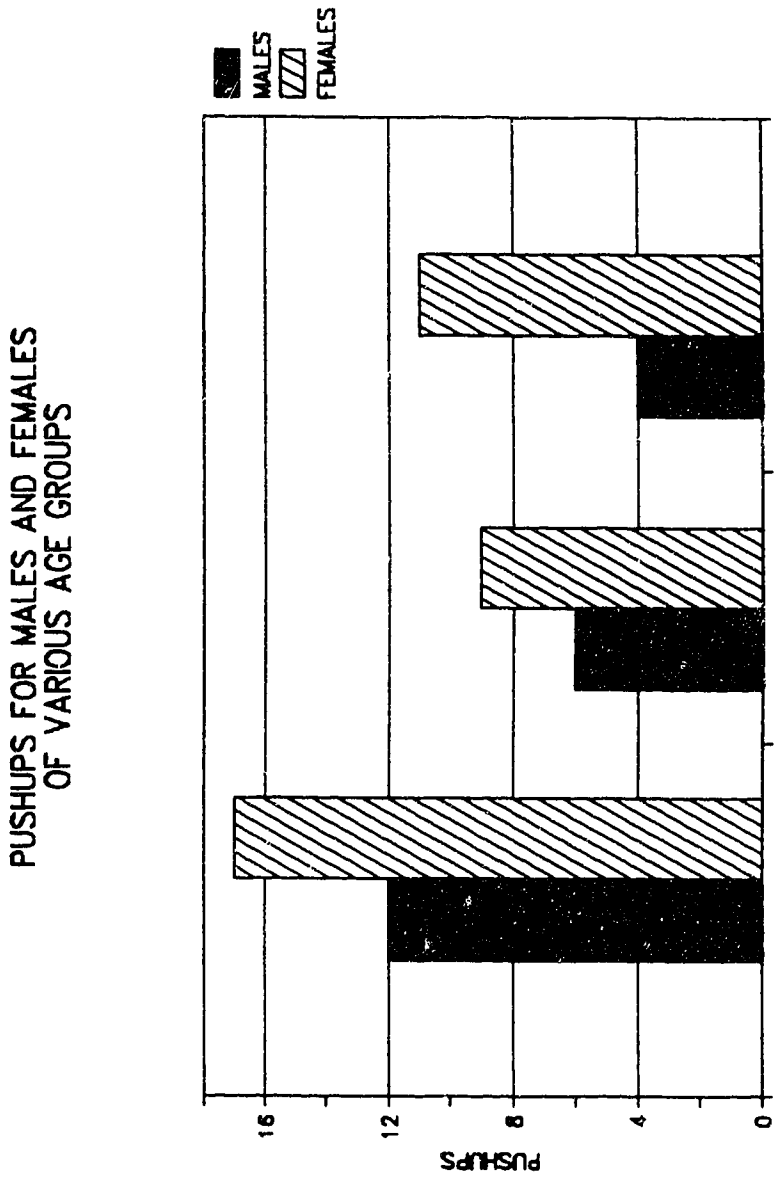

PUSHUPS FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS
MALES
FEMALES
PUSHUPS
0
4
8
12
16
50-59
60-69
70+
AGE GROUPS

FIGURE 9

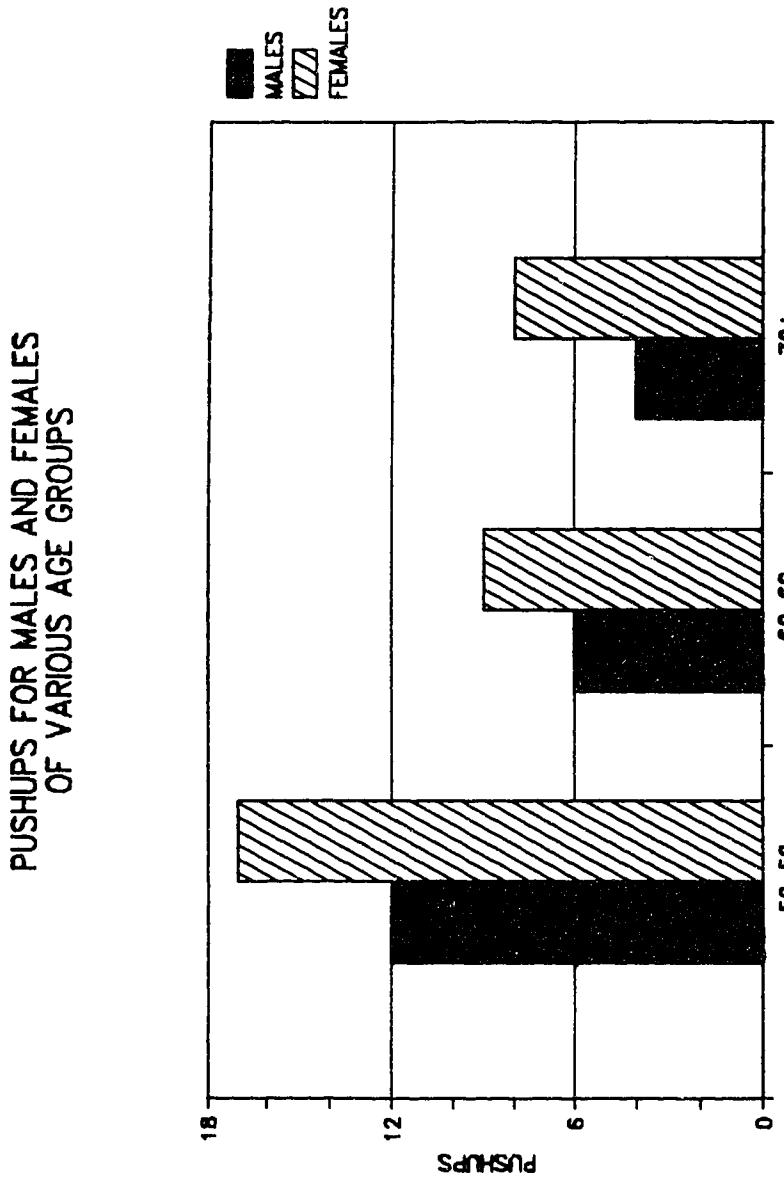

PUSHUPS FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS
MALES
FEMALES
PUSHUPS
18
12
6
0
50-59
60-69
70+
AGE GROUPS

FIGURE 9a

SITUPS FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS

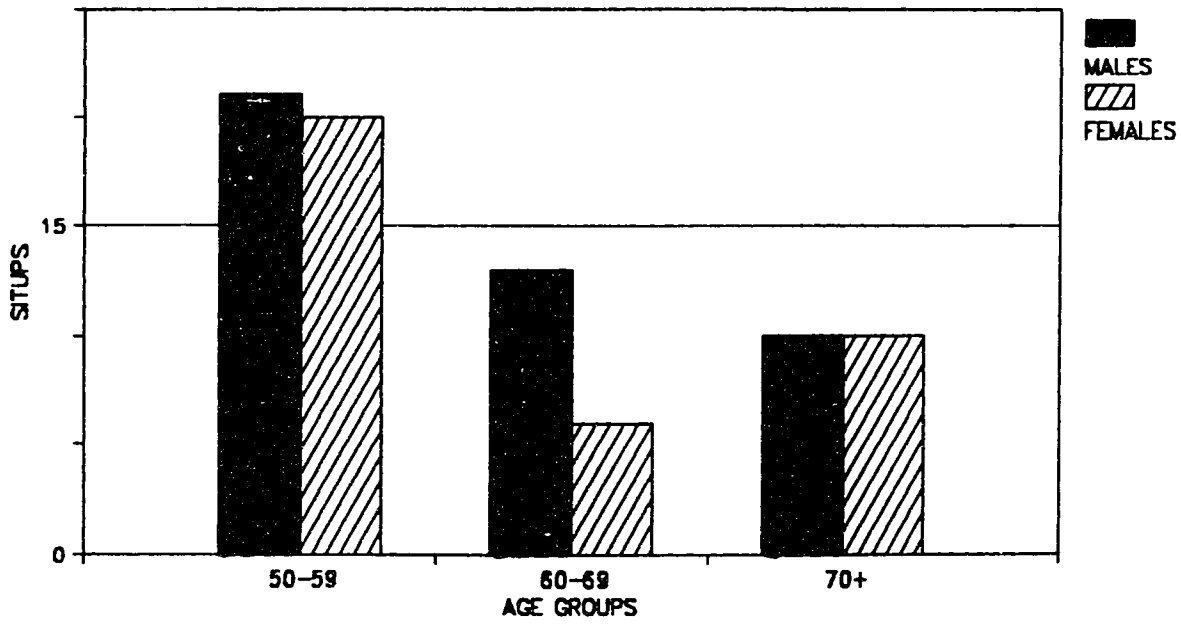


FIGURE 10

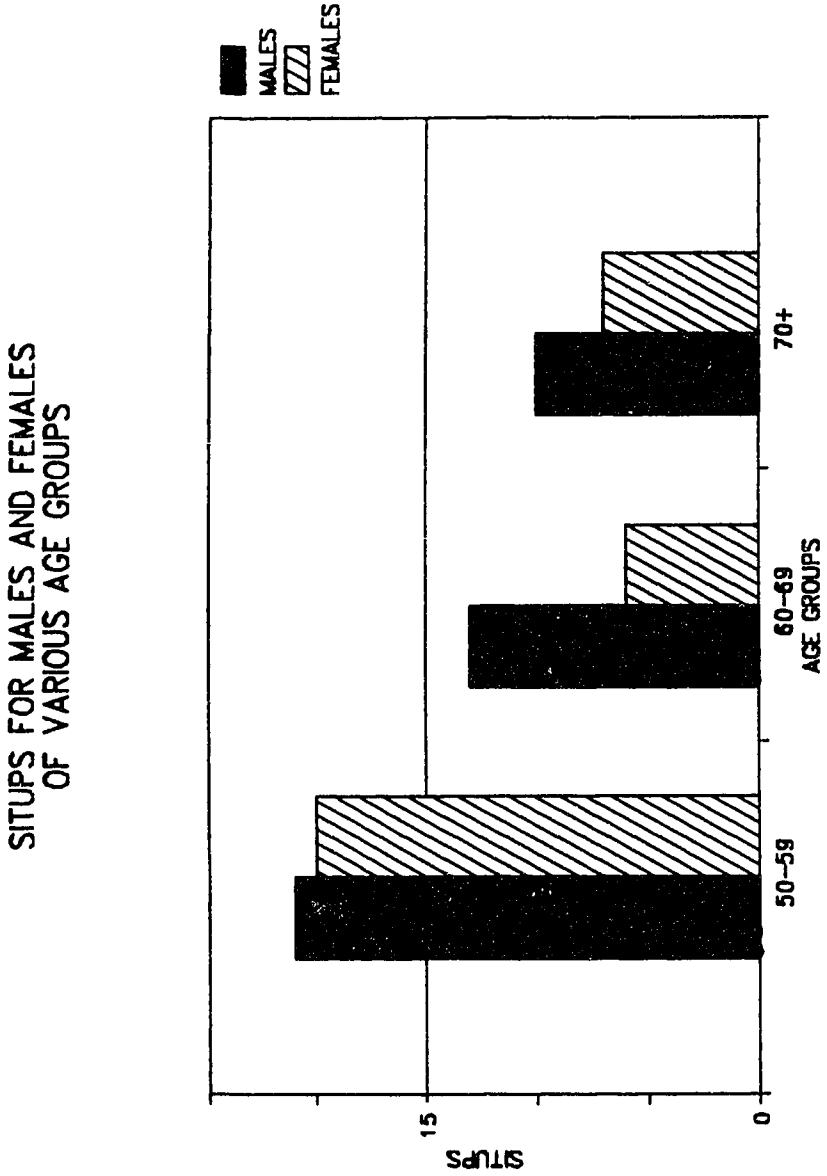

SITUPS FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS
MALES
FEMALES
SITUPS
15
0
50-59
60-69
70+
AGE GROUPS

FIGURE 10a

(aged 20-94) from a broad range of socioeconomic and occupational groups. The means for these groups were consistently lower than those from this study, however Mathiowetz's sample contained subjects from senior citizen homes and the age range went as high as 94. Stringent criteria concerning health and injury had to be met therefore this information should be representative of a normal aging population. Kallaman et. al (1990) reported longitudinal and cross-sectional data for 247 and 342 subjects respectively. Grip strength measures were made on healthy male volunteers in the Baltimore Longitudinal Study of Aging (BLSA). Male subjects from the Seniors games were shown to be stronger in all age groups when compared to the cross-sectional data and stronger than the two oldest age groups when compared to the longitudinal data. Table six shows the percent of average grip strength decline for the Seniors Games data was much less than that shown for other reported studies for both men and women. One of the reasons has been shown to be the decrease in physical activity with age which results in a declining grip strength (Martin, Neale and Elia, 1984; Wickham et. al., 1989). The pushup normative data shows this same trend except the averages for males in the 60-69 age group were below average values for the CSTF norms. Situps showed the men and women from ages 60-69 to have means below average CSTF norms whereas the younger age groups were above this ranking. The participants of the Seniors games were

TABLE VI

COMPARISONS FOR PERCENT DECREASE
OF AVERAGE GRIP STRENGTH RELATIVE TO AGE 50-59

Group	60-69		70+	
	M	F	M	F
Seniors Games	7%	+1%	16%	15%
CSTF	9%	7%	N/A	N/A
Mathiowetz et. al, 1985	N/A	N/A	35%	25%
Kallman et. al., 1990				
Longitudinal	N/A	N/A	25%	N/A
Cross Sectional	N/A	N/A	26%	N/A

a unique group who pursued a more active lifestyle, most of which would have had to be consistently active to compete in some of the events such as track and field, swimming, and gymnastics. The data showed no significant decline in LBW from the youngest to the oldest age group and a correlation between LBW and grip strength was significant for the entire sample (.77: p=.05). The relatively high values for percent body fat, body weight and LBW seen in the 60-69 age group may have proven to be a disadvantage when performing tests that use body weight as the resistance such as situps and pushups. This increase in body weight and the observed decrease in grip strength, suggesting a decrease in overall strength may have contributed to factors limiting their performance in the pushup. The increase in body fat has been shown to be preferentially distributed on the trunk region in men (Shimokata et. al., 1989). The observed decrease in grip strength and the deposition of increased body fat on the trunk region may have contributed to this groups lower than the CSTF average ranking for pushups. Ready and Marshall (1989) showed grip strength significantly correlated to number of pushups to exhaustion in national field hockey players. Situps for men and women of the two youngest age groups were below the CSTF norms. A possible explanation might be that the situp is a very specific movement pattern and for proficiency and improvement, these same movements must be performed. Although these subjects were active and

showed a higher than average grip strength, they may not do regular body resistance exercises such as the situp.

Flexibility

A two way ANOVA showed significant differences between age groups and also between sexes for mean flexibility values ($p=.05$). The post hoc Newman Keuls test distinguished the significance between the youngest and the two oldest age groups. The women were also shown to be more flexible consistently in all age groups (figure 11). Studies have reported women being significantly more flexible than men for various measures throughout adulthood (James and Parker, 1989; Walker et. al., 1984; Boone, 1981). The general trend showed a decrease in flexibility, measured by the Sit and Reach apparatus with age (figure 11) which is consistent with other studies (Busch and Rikli, 1986; Boone, 1981). Although variability has been shown to increase (Fitzgerald, 1983) and decrease (Einkauf, 1987) with age, this study showed the range of scores contained within one standard deviation of the mean to increase for the men and decrease for the women. Normative data for the average Canadian showed lower average values for flexibility when compared to those values reported in this study (Table III) for both men and women. When activity versus inactivity as categorized by event was analyzed by ANOVA, there was a significant difference ($p=.05$) between most and least active women and most and least active

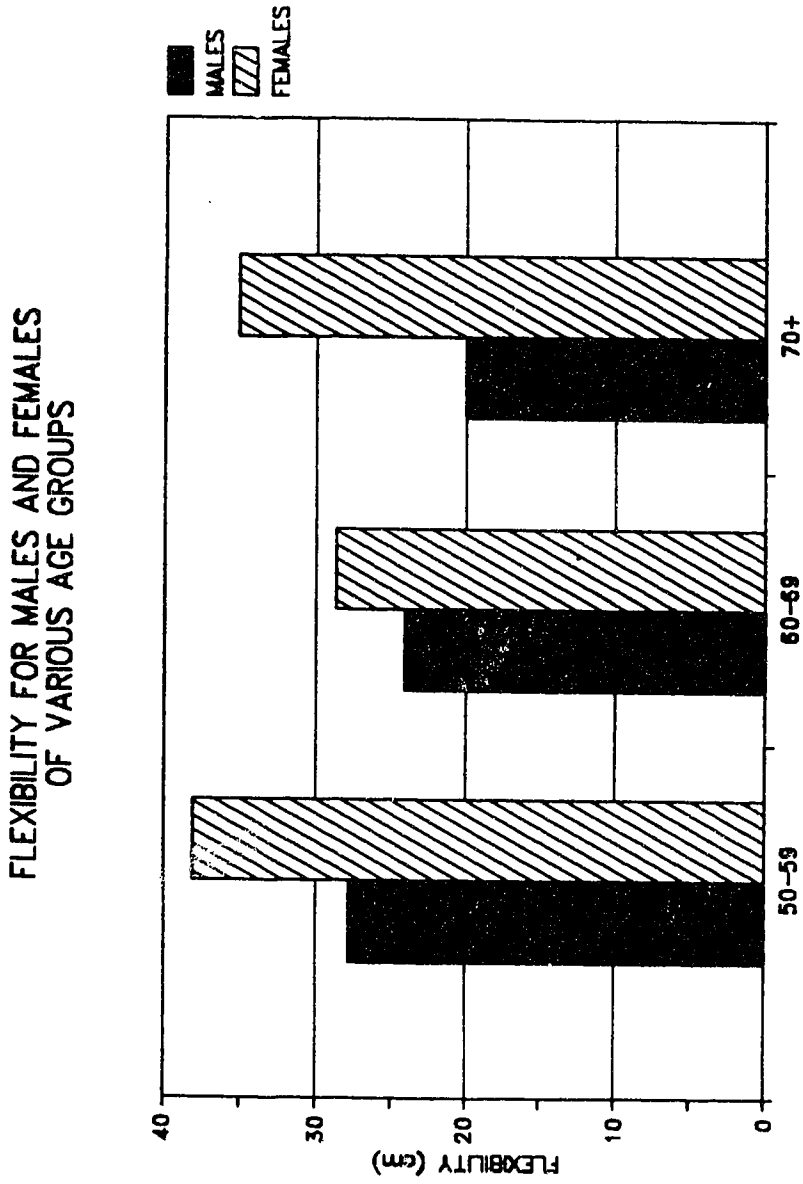

FLEXIBILITY FOR MALES AND FEMALES
OF VARIOUS AGE GROUPS
MALES
FEMALES
FLEXIBILITY (cm)
0
10
20
30
40
50-59
60-69
70+
AGE GROUPS

FIGURE 11

men with the most active group having been more flexible in those structures measured by the sit and reach apparatus. This and the previous observations supported the documented positive effects of activity on maintenance of normal muscle compliance with age (Williams et. al., 1988).

Cardiovascular Fitness

A two way ANOVA (p=.05) showed no significant differences in mean pre-exercise heartrates for ages or sexes (figure 12). A two-way ANOVA (p=.05) showed significant differences between sexes and age groups for predicted VO_{2max} using the CSTF step test (figure 13). Men reported an observation (Blumenthal et. al., 1989) of higher VO_{2max} than women in all age groups. The youngest group had significantly higher values than the two oldest groups showing a decline in VO_{2max} with age reported in other cross sectional studies (Buskirk and Hodgson, 1987). When analyzed as an average percent loss relative to age 50-59, the men showed a drop of 15% in the first decade and 8% in the subsequent decade. Women showed a 21% loss in first and an 8% loss in the subsequent decade. These losses were quite substantial for VO_{2max}. Other factors such as the increase in body weight have been shown to contribute to the decline in VO_{2max} with age (Health, 1981). In the 60-69 year age group, the average weight for subjects was greater than that of the 50-59 year olds. This may have contributed to the rapid rate of loss seen with this age

PRE-EXERCISE HEARTRATE FOR MALES
AND FEMALES OF VARIOUS AGE GROUPS

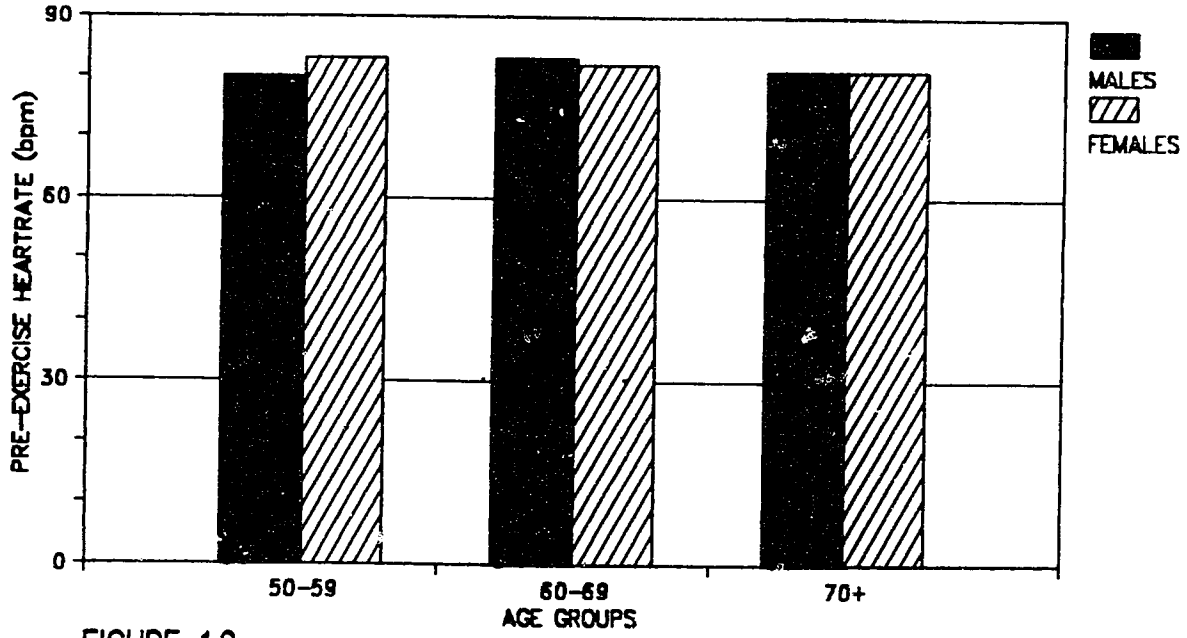


FIGURE 12

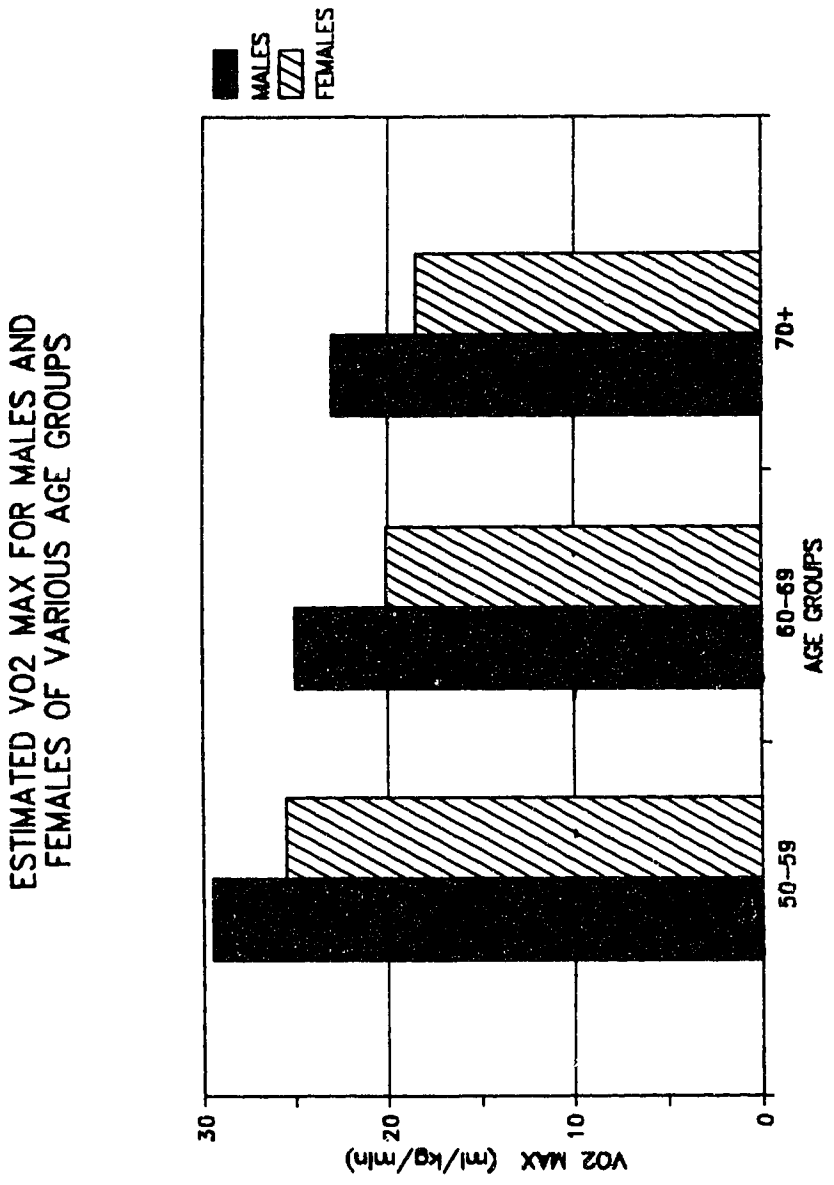

ESTIMATED VO2 MAX FOR MALES AND
FEMALES OF VARIOUS AGE GROUPS
MALES
FEMALES
VO2 MAX (ml/kg/min)
0
10
20
30
50-59
60-69
70+
AGE GROUPS

FIGURE 13

group relative to the previous decade (21% and 3[illegible]% for women and men respectively). A recent cross sectional study (cited in Hagberg et. al., 1989) indicated that most of the reduction in VO_{2max} that occurs with aging is eliminated if VO_{2max} is expressed relative to muscle mass, not only because of a fat weight gain but because of a loss of muscle strength and mass with age. As well as contributing to the high percent of loss in VO_{2max} relative to the previous decade, the extra body weight may create a situation of extreme leg fatigue during the test possibly underestimating VO_{2max} for some subjects. The ratios for an ANOVA looking at activity groups as categorized by event of participation show significant differences in VO_{2max} for activity levels ($p=.05$). The most active males are significantly different (higher VO_{2max}) than the most and least active females and least active males. The least active males are significantly different (higher VO_{2max}) from the least active females. The most active females are significantly different (higher VO_{2max}) from males and females in the least active categories. Finally, the least active females show the significantly lower VO_{2max} values than all other activity groups. These results support the proposed hypothesis from other studies that an active lifestyle will slow the rate of decline of VO_{2max} (Buskirk and Hodgson, 1987). CSTF normative average data for these Seniors Games participants show them to be below the average for both sexes and all age groups except

women 50-59 (Table III). Initially, this is surprising since they did participate actively in the Seniors Games with some of them having participated in the games before. Upon reviewing the literature again, the suggestion has been made that the rate of decline for adults is fastest between the 20's and 30's and declines more slowly after that. Participation in active lifestyles for seniors is a relative recent phenomenon, therefore these seniors may have done very little in the way of fitness for the majority of their lifetime before they decided to compete at the Seniors games. Therefore, their initial functional fitness could have decreased significantly throughout the years. The suggestion here is that they have not yet recovered a value of functional fitness comparable to their peers although they retain higher than average values for other fitness parameters such as strength and flexibility. One other explanation relates to the protocol for measuring heartrates for the step test. The heartrate scores after stepping are based on a ten-second heartrate count. Heartrate monitors were used during the testing for the Seniors Games and this precluded the necessity to count for the entire ten seconds so heartrate values were taken immediately upon cessation of stepping. The reference group from the CSTF measured heartrates by a pulse count for ten seconds. There might have been a difference in the final heartrate scores where one group had an extra ten seconds for heartrate to slow down

while the other did not. This would have a negative effect on the VO_{2max} scores for the Seniors Games participants since a lower heartrate gives a higher VO_{2max} score.

Chi Square Analyses

Chi Square analyses were done to determine the relationships between groups as determined by the questionnaire data. The reported χ^2_{obt} values showed that only two of the comparisons showed a difference that was significant ($p=.05$) between the observed frequencies and the expected frequencies (Table VII). It was found that for men, aerobic fitness category and activity level were not independent. The men competing in the most active events at the Seniors Games seemed to be more aerobically fit as predicted by the CSTF stepping test than the less active males. This was expected since events like tennis and swimming require periods of sustained continuous activity necessary for aerobic energy metabolism. When this same statistical analysis was done for females, a violation of the sampling size occurred. There were not enough women to satisfy the expected frequencies of at least 5 for each cell.

Perceived level of fitness for men and aerobic fitness as predicted by the CSTF stepping test were not independent from each other. Men seemed to overestimate their fitness level in terms of the results attained on the predicted VO_{2max} test. The most common explanation offered for overly

TABLE VII
CHI SQUARE COMPARISONS

COMPARISONS MADE	X^2_{obt}
Females most/least active VS aerobic fitness category	6.65
Males most/least active VS aerobic fitness category	9.53*
Male smokers VS aerobic fitness category	7.97
Female smokers VS aerobic fitness category	3.90
Males activity status VS aerobic fitness category	22.06
Females activity status VS aerobic fitness category	15.21
Males perceived level of fitness VS aerobic fitness category	19.76*
Females perceived level of fitness VS aerobic fitness category	11.41
Males most/least active VS perceived daily level of energy	2.84
Females most/least active VS perceived daily level of energy	1.65
Males education VS smoking	3.38
Females education VS smoking	1.25
Females most/least active VS smoking	1.89
Males most/least active VS smoking	2.40

* Significant at alpha =.05.

positive health assessments is the assertion that elderly persons believe that "old age in inextricably associated with illness and functional decline which leads to the expectation of the normalization of symptoms" (Levkoff, 1987). This sample of men from the Seniors games participants were representatives of a sample of individuals taking a more active role in making choices for themselves regarding competition, activities and interaction. This has been shown to contribute to a better overall sense of well being and may have been reflected in the overestimation of fitness level for the men. A study was conducted on 91 ambulatory adults aged 65-90)in a nursing home (Langer and Rodin, 1976 cited in The Social Psychology of Leisure and Recreation, 1980). The test group was told that they had responsibility for themselves and the comparison group was told that the staff had responsibility for them. Accordingly, the former group had freedom to choose and decide what recreational activities they wanted and when, how they preferred their rooms to be arranged, whether or not they wanted a plant and what kind, etc... Conversely, staff made all the decisions for the subjects assigned to the comparison group. The results showed the test group to be happier, and more active and alert than the comparison group. Most importantly, the treatment increased the subjects' activity level in general and their interpersonal activity in particular. In short, the data implied that enhancing the subjects' perceived

control over their lives increased their activeness, interpersonal activity, mental alertness and psychological well-being.

For the analysis between activity status and aerobic fitness category, the basic assumption for sample size was violated for both sexes therefore the probability values given for $\underline{X}'$ did not apply. These variables were chosen for comparison to study the relationship of activity status in terms of typical activity patterns during daily living and aerobic fitness. It is interesting to entertain the idea that there may be a relationship between the rate of decline of V02max and patterns of activity during daily living (ie. sleeping, mostly sitting with some standing with very little walking, mostly standing with some walking and few vigorous activities, etc..).

When smoking and education were compared using the Chi square analysis, these variables remained independent. An expected result would be that the more highly educated a person is, the more aware they would be of the negative effects of smoking. However, since the ill effects of smoking have been known for some time, this knowledge would have become known to these seniors through media, advertising, peers, and relatives independent of their level of education.

No significant X' ratios were obtained for the other comparisons that were made with smoking for either males or

females. A possible explanation could be that the choice to smoke or not to smoke is made with lifestyle in mind. Since all of these seniors, both the most and least active and the more and less aerobically fit individuals were actively involved in competition at the Seniors Games, an assumption could be made about their choices for lifestyle pursuits independent of measures of fitness or competitive event. Expected is that the least active and least fit would prove to be the smokers however, no relationship was found. An assumption could be made that smoking is a health and lifestyle choice and even those less fit and less active were making positive choices against proven health deterrents such as smoking.

Again, no relationship was found between the aerobic fitness category and the perceived daily level of energy for men and women. Unexpected since the more fit might be considered to have a perceived higher level of energy more often. The key here may not have been whether individuals are more or less fit but whether they were or were not part of the active interactions occurring between the Seniors Games participants. The levels of fitness failed to create an impact on analyses like these possibly because when seniors had become even moderately active, the enhancement of quality of life might have been such that the resulting perceived level of energy compared to previous levels may be high.

SUMMARY

A descriptive analysis was completed on data obtained from 189 participants aged 52-84 in the 1986 Seniors Games in Grande Prairie, Alberta. Differences in anthropometric and fitness measures for 3 age groups for both sexes were studied as well as relationships between specific variables. Also examined were relationships between groups as determined by the questionnaire results.

Females were found to be significantly (p=.05) shorter, lighter, fatter, less strong, more flexible and less aerobically fit than males when means for the three age groups were studied. Mean values for height, weight and lean body weight showed no significant change with age however moderately high significant (p=.05) correlations were found between weight and body mass index (r=79), weight and lean body weight (r=.83), and weight and forearm circumference (.86). Percent body fat, sum of three skinfolds and body mass index were not significantly different (p=.05) between the age groups.

Mean grip strength, pushups and situps to exhaustion were significantly lower (p=.05) for the two older groups when compared to the youngest group for both sexes. Grip strength showed a significant (p=.05) correlation (r=.74) with forearm circumference and (r=.77) with lean body weight.

Mean flexibility measured by the modified sit and reach apparatus was significantly lower in the two oldest age

groups with the means in the youngest age group being the highest.

Mean pre-exercise heartrate was considered to be the same for all age groups and both sexes. No significant differences were found. VO_{2max} as predicted by the CSTF step test was significantly different (higher) in the youngest age group when compared to both of the older age groups ($p=.05$).

Chi square analysis noted some significant ($p=.05$) relationships between groups using the questionnaire data. There was a relationship between the males activity level and their predicted aerobic fitness with the men in the most active competitive events having the highest predicted aerobic fitness in terms of fitness category . For perceived level of fitness and predicted aerobic fitness there was also a relationship suggesting that the males overestimated their fitness levels in terms of being less fit, more fit or as fit as someone else their own age.

CONCLUSIONS

A trend was evident with all of the anthropometric measures that reflected trends reported in the literature, however significant differences were not noted between the age groups implying that the senior participants were not experiencing as rapid a decline in mean values for variables such as height, weight and lean body weight. Significant differences were found for age and sex for strength, flexibility and cardiovascular performance with the men being stronger and have higher VO_{2max} values and the women being more flexible. Significant differences were found for these variables between the youngest and the two oldest groups but not between the two oldest groups. Research has shown that continued activity slows aging processes such as bone degeneration, muscle fiber atrophy, connective tissue accumulation and decline in functional capacity. The focus of this study was not on how long these seniors have been involved in physical activity however this information would be valuable in suggesting that the tall stature of these seniors could be attributed to the relationship between activity and retention of bone mass as suggested by Lanyon (1980, in Handbook of the Biology of Aging, 1987). The relationship between grip strength and forearm circumference and lean body weight is evident in the significant correlations existing between these three variables.

Although an active lifestyle can be related to the retention of muscle strength, muscle circumference and lean body weight are only two of the variables related to the ability of an individual to generate force. Clarkson et al., (1981) suggests that factors other that fiber size contribute to the strength decline with age. Among the changing variables with age are a more complex electromyographic pattern affecting motor unit firing patterns and also loss of functioning motor units. More research is needed on the effects of activity on the neural aspects of muscle contraction before conclusions can be made. The retention of flexibility relative to the sit and reach apparatus in the more active seniors is evident. Activity naturally guides the limbs and joints through necessary ranges of motion to perform specific tasks and lack of activity (and therefore movement) has been suggested to play a role in the accumulation of connective tissue and a consequent decrease in compliance of aging muscle. Predicted VO_{2max} scores for the active groups are generally higher than the inactive groups however mean scores are lower than those averages reported in the literature for comparable age groups and sexes. The increase in body weight seen in the two older age groups could have contributed to this since VO_{2max} is expressed relative to body weight. This problem could be eliminated if VO_{2max} is expressed relative to muscle mass.

The questionnaire data reflecting perceived fitness

and energy of the participants as well as lifestyle habits suggested that the important factor with this unique group of people is that they were active. The degrees of predicted fitness and intensity of activity seemed to be secondary to the perceived gains in quality of life achieved through becoming involved with controlling their choices for physical activities and their social interactions. "Since the elderly lose their social partners or significant others more frequently than do younger persons, the need for social interaction among the elderly is particularly important" (Iso Ahola in The Social Psychology of Leisure and Recreation, 1980, p. 348). Iso Ahola suggests that it is not the activity in itself that is important, but rather the extent to which the activity provides a sense of control and predictability with respect to the environment.

These results suggested that participation in the Seniors Games had a positive effect on the retention of lean body weight, strength, and flexibility and a moderating effect on changes in body composition for the participants. Activity was suggested to be a key factor in the comparisons between groups where the level of activity was of little consequence in differentiating the groups. The lack of significance in the Chi Square comparisons suggests that even least active individuals benefit from their involvement in the games. Taking a more active role in making choices about lifestyle has been shown to contribute to a better

overall sense of well being and, reflected in the questionnaire data are hints that simply activity and not level of activity plays an important role in a senior's sense of well being.

REFERENCES

AOYAGI, Y., KATSUTA, S., Relationship between the starting age of training and physical fitness in old age. Canadian Journal of Sport Science 15(1): 65-71, 1990.

ASTRAND, I., Aerobic work capacity in men and women with special reference to age. Acta Physiologica Scandinavica Supplement 169, 49, 1960.

ASTRAND, I., The physical work capacity of workers 50-64 years old. Acta Physiologica Scandinavica Supplement 169, 49: 92, 1958.

ASTRAND, I., ASTRAND, P.O., HALLBACK, I., KILBOM, A., Reduction in maxmal oxygen uptake with age. Journal of Applied Physiology 35(5): 649-654, 1973.

ASTRAND, P.O., Physical Performance as a Function of Age. Journal of the American Medical Association 205(11): 105-109, 1968.

BADENHOP, D.T., CLEARY, P.A., SCHAAL, S.F., FOX, E.L., BARTELS, R.L., Physiological adjustments to higher- or lower-intensity exercise in elders. Medicine and Science in Sports and Exercise 15(6): 496-502, 1983.

BAKER, G.T., SPROTT, R.L., Biomarkers of aging. Experimental Gerontology 23: 223-239, 1988.

BLUMENTHAL, J.A., EMERY, C.F., MADDEN, D.J., GEORGE, L.K., COLEMAN, R.E., RIDDLE, M.W., MCKEE, D.C., REASONER, J., WILLIAMS, R.S., Cardiovascular and behavioral effects of aerobic exercise training in healthy older men and women. Journal of Gerontology 44(5): M147-157, 1989.

Bodylab - Desirable Weight Protocol. Bailey, D. A., and R. L. Mirwald. College of Physical Education, University of Saskatchewan, Saskatoon, Canada.

BORKAN, G.A., HULTS, D.E., GERZOF, S.G., ROBBINS, A.H., SILBERTS, C.K., Age changes in body composition revealed by computed tomography. Journal of Gerontology 38(6): 673-677, 1983.

BROWN, M., Change in fibre size, not number, in ageing skeletal muscle. Age and Ageing 16: 244-248, 1987.

BRUCE, R.A., Exercise, functional aerobic capacity, and aging another viewpoint. Medicine and Science in Sports and Exercise 16(1): 8-13, 1984.

BUSKIRK, E.R., HODGSON, J.L., Age and aerobic power: The rate of change in men and women. Federation Proceedings 46(5): 1824-1829, 1987.

CLARKSON, P.M., KROLL, W., MELCHIONDA, A.M., Age, isometric strength, rate of tension development and fiber type composition. Journal of Gerontology 36(6): 648-653, 1981.

DEHN, M.M., BRUCE, R.A., Longitudinal variations in maximal oxygen intake with age and activity. Journal of Applied Physiology 33: 805-807, 1972.

DENHAM, M.J., HODKINSON, H.M., QURESHI, K.N., Loss of grip in the elderly. Geront. clin. 15: 268-271, 1973.

DRINKWATER, B.L., HORVATH, M.S., WELLS, C.L., Aerobic power of females, ages 10 to 68. Journal of Gerontology 30(4): 385-394, 1975.

EHSANI, A.A., Cardiovascular adaptations to exercise training in the elderly. Federation Proceedings 46(5): 1840-1843, 1987.

EINKAUF, D.K., GOHDES, M.L., JENSEN, G.M., JEWELL, M.J., Changes in spinal mobility with increasing age in women. Physical Therapy 67(3): 3370-375, 1987.

FARRAR, R.P., MARTIN, T.P., ARDIES, C.M., The interaction of aging and endurance exercise upon the mitochondrial function of skeletal muscle. Journal of Gerontology 36(6): 642-647, 1981.

FITZGERALD, K.G., WYNVEEN, K.J., RHEAULT, W., ROTHSCHILD, B., Objective assessment with establishment of normal values for lumbar spinal range of motion. Physical Therapy 63(11). 1776-1781, 1983.

FOZARD, J.L., METTER, J., BRANT, L.J., Next steps in describing aging and disease in longitudinal studies. Journal of Gerontology 45(4): P116-127, 1990.

GERSTENBLITH, G., RENLUND, D.G., LAKATTA, E.G., Cardiovascular response to exercise in younger and older men. Federation Proceedings 46(5): 1834-1839, 1987.

HAGBERG, J.M., Effect of training on the decline of VO_2max with aging. Federation Proceedings 46(5): 1830-1833, 1987.

HAGBERG, J.M., GRAVES, J.E., LIMACHER, M., WOODS, D.R., LEGGETT, S.H., CONONIE, C., GRUBER, J.J., POLLOCK, M.L., Cardiovascular responses of 70 to 79 year old men and women to exercise training. Journal of Applied Physiology 66(6): 2589-2594, 1989.

Handbook of the Biology of Aging: Second Edition. Editors: Finch, C.E., Schneider, E.L., New York: Van Nostrand Reinhold Company, 1985.

HEATH, G.W., HAGBERG, J.M., EHSANI, A.A., HOLLOSZY, J.O., A physiological comparison of young and older endurance athletes. Journal of Applied Physiology 51(3): 634-640, 1981.

HOLLOSZY, J.O., Aging and exercise: Physiological interactions. Federation Proceedings 46(5): 1823, 1987.

HOPKINS, D.R., MURRAH, B., HOEGER, W.W.K., RHODES, R.C., Effect of low-impact aerobic dance on the functional fitness of elderly women. The Gerontologist 30(2): 189-192, 1990.

Interpretation and Councelling Manual for the Canadian Standardized Test of Fitness. Fitness Canada, 1987.

INGRAM, D.K., Key questions in developing biomarkers of aging. Experimental Gerontology 23: 429-434, 1988.

JAMES, B., PARKER, A.W., Active and passive mobility of lower limb joints in elderly men and women. American Journal of Physical Medicine and Rehabilitation 68(4): 162-167, [illegible].

KALLMAN, D.A., PLATO, C.C., TOBIN, J.D., The role of muscle loss in the age-related decline of grip strength: Cross-sectional and longitudinal perspectives. Journal of Gerontology 45(3): M82-88, 1990.

LAPORTE, R.E., BLACK-SANDLER, R., CAULEY, J.A., LINK, M., BAYLES, C., MARKS, B., The assessment of physical activity in older women: Analysis of the interrelationship and reliability of activity monitoring, activity surveys, and caloric intake. Journal of Gerontology 38(4): 394-397, 1983.

LARSSON, B., RENSTROM, P., SVARDSUDD, K., WELIN, L., GRIMBY, G., ERIKSSON, H., OHLSON, L.O., BJORNTORP, P., Health and aging characteristics of highly physically active 65 year old men. The International Journal of Sports Medicine. 5: 336-340, 1984.

LARSSON, L., KARLSSON, J., Isometric and dynamic endurnace as a function of age and skeletal muscle characteristics. Acta Physiologica Scandinavica 104: 129-136, 1978.

LARSSON, L., SJODIN, B., KARLSSON, J., Histochemical and biochemical changes in human skeletal muscle with age in sedentary males, age 22-65 years. Acta Physiologica Scandinavica 103: 31-39, 1978.

Later Life: Third Edition. Lewis, R.A., New Jersey: Lawrence Erlabaum Associates, 1989.

LEE, D.J., MARKIDES, K.S., Activity and mortality among aged persons over an eight year period. Journal of Gerontology 45(1): S39-42, 1990.

LEVKOFF, S.E., CLEARY, P.D., WETLE, T., Differences in the appraisal of health between aged and middle aged adults. Journal of Gerontology 42(1): 114-120, 1987.

MACLENNAN, W.J., HALL, M.R.P., TIMOTHY, J.I., ROBINSON, M., Is weakness in old age due to muscle wasting? Age and Ageing 9: 188-192, 1980.

MACRAE, L.F., WRIGHT, V., Measurement of back movement. Annals of Rheumatic Disease 28: 584-589, 1969.

MARKIDES, K.S., LEE, D.J., Predictors of well-being and functioning in older Mexican Americans and Anglos: An eight year follow up. Journal of Gerontology 45(1): S6[illegible]-73, 1990.

MARTI, B., PEKKANEN, J., NISSINEN, A., KETOLA, A., KEVELA, S., PUNSAR, S., KARVONEN, M.J., Association of physical activity with coronary risk factors and physical ability: Twenty-year follow-up of a cohort of Finnish men. Age and Ageing 18: 103-109, 1989.

MARTIN, S., NEALE, G., ELIA, M., Factors affecting maximal momentary grip strength. Human Nutrition: Clinical Nutrition 39C: 137-147, 1984.

MATHIOWETZ, V., KASHMAN, N., VOLLAND, G., WEBER, K., DOWE, M., ROGERS, S., Grip and pinch strength: Normative data for adults. Archives of Physical Medicine and Rehabilitation 66: 69-74, 1985.

MENARD, D., STANISH, W.D., The aging athlete. The American Journal of Sports Medicine 17(2): 187-195, 1989.

MOORE, C.D., PFEIFFER, S., A cross-longitudinal study of physical fitness in Ontario dairy farmers aged fifty years and over. Canadian Journal on Aging 6(3): 189-198, 1987.

MOSSEY, J.M., HAVENS, B., ROOS, N.P. SHAPIRO, E., The Manitoba longitudinal study on aging: Description and methods. Gerontologist 21(5): 551-558, 1981.

Normal Human Aging: The Baltimore Longitudinal Study of Aging. Shock, N [illegible] Washington: U.S. Government Printing, 1984.

PAYTON, O.D., POLAND, J.L., Aging process: Implications for clinical practice. Physical Therapy 63(1): 41-47, 1983.

PEARSON, M.B., BASSEY, E.J., BENDALL, M.J., Muscle strength and anthropometric indices in elderly men and women. Age and Ageing 14: 49-54, 1985.

PEARSON, M.B., BASSEY, E.J., BENDALL, M.J., The effects of age on muscle strength and anthropometric incices within a group of elderly men and women. Age and Ageing 14: 230-234, 1985.

Physical Activity and Aging: Second Edition. Shephard, R.J. Maryland: Aspen Publishers, 1987.

PROFANT, G.R., EARLY, R.G., NILSON, K.L., KUSUMI, F., HOFER, V., BRUCE, R.A., Responses to maximal exercise in healthy middle-aged women. Journal of Applied Physiology 33(5): 596-599, 1972.

READY, A.E., MARSHALL, J.D., Grip strength is moderately correlated with leg strength and upper body endurance. The Canadian Journal of Sport Science Abstract 14(4): 134P, 1989.

RIKLI, R., BUSCH, S., Motor performance of women as a function of age and physical activity level. Journal of Gerontology 41(5): 645-649, 1986.

ROBINSON, S., DILL, D.B., TZANKOFF, S.P., WAGNER, J.A., ROBINSON, R.D., Longitudinal studies of aging in 37 men. Journal of Applied Physiology 38(2): 263-267, 1975.

SEALS, D.R., HAGBERG, J.M., HURLEY, B.F., EHSANI, A.A., HOLLOSZY, J.O., Endurance training in older men and women I. Cardiovascular responses to exercise. Journal of Applied Physiology 57(4): 1024-1029, 1984.

SHEPHARD, R.J., World standards of cardiorespiratory performance. Archives of Environmental Health 13: 664-672, 1966.

SIDNEY, K.H., SHEPHARD, R.J., Maximum and submaximum exercise tests in men and women in the seventh, eighth, and ninth decades of life. Journal of Applied Physiology 43(2): 280-287, 1977.

SIDNEY, K.H., SHEPHARD, R.J., HARRISON, J.E., Endurance training and body composition of the elderly. American Journal of Clinical Nutrition 30: 326-333, 1977.

SMITH, E.L., GILLIGAN, C., Physical activity prescription for the older adult. The Physician and Sportsmedicine 11(8): 91-101, 1983.

Social Psychological Perspectives on Leisure and Recreation. Editor: Iso-Ahola, S.E., Illinois: Charles C. Thomas, 1980.

SOLO Statistical System: Version 1.0. BMPD Statistical Software, Inc., Los Angeles, CA, 1988.

The Social Psychology of Leisure and Recreation. Iso-Ahola, S.E., Iowa: Wm. C. Brown Company, 1980.

THORNGREN, K.G., WERNER, C.O., Normal grip strength. Acta Orthopeadia Scandinavica 50: 255-259, 1979.

TZANKOFF, S.P., ROBINSON, S., PYKE, F. S., BROWN, C.A., Physiological adjustments to work in older men as affected by training. Journal of applied Physiology 33: 346-350, 1972.

VOGEL, J.A., PATTON, J.F., MELLO, R.P., DANIELS, W.L., An analysis of aerobic capacity in a large United States population. Journal of Applied Physiology 60: 494-500, 1986.

WALKER, J.M., DEBBIE SUE, MILES-ELKOUSY, N., FORD, G., TREVELYAN, H., Active mobility of the extremities in older subjects. Physical Therapy 64(6): 919-923, 1984.

APPENDIX A

I N S T R U C T I O N S

TO: The Research Participant *DATE: July 29, 1986*

STEP 1:

MAKE AN APPOINTMENT to be tested with the research team. Make sure it doesn't conflict with your participating event.

STEP 2:

FILL OUT the consent form and the questionnaire as accurately as possible PRIOR to your appointment. (Leave any confusing questions until you come to the research area).

STEP 3:

BRING YOUR QUESTIONNAIRE to your appointment as we need your consent form and part of the questionnaire to admit you to the study. If there are any medical constraindications with your health, we may partially limit your participation in the study.

STEP 4:

DRESS FOR MOVEMENT. Come to your scheduled appointment dressed if possible in a loose T-shirt (or blouse), loose stretch shorts or warmup pants, flat walking shoes or runners and socks. (We will have some spare exercise attire should there be a need).

July 29, 1986

Dear

Congratulations on qualifying for the 1986 Alberta Seniors Games! The University of Alberta hopes to learn more about you!

We hope you have heard about our health, fitness and lifestyle research study taking place at the Games. About 300 Seniors will be measured between August 7th and 9th.

Your name was RANDOMLY DRAWN to be eligible to be part of this research study. We need YOUR help in order to collect information on Alberta Seniors.

Please read the instructions carefully and remember to keep your APPOINTMENT TIME which is:

_____ a.m. / p.m.

_____ August

Room E-121 Grande Prairie Regional College
Main Building

We thank you in advance for your time and cooperation.

Sincerely,

Sandy J. O'Brien
Department of Physical Education and
Sport Studies
University of Alberta

Pat R. Conger
Department of Physical Education and
Sport Studies
University of Alberta

SOB/jlp

Experiment Consent Form

My signature on this sheet indicates that I understand that all persons in this project are volunteers, that I can withdraw at any time from the experiment or any phase of it, and that I have been or will be informed as to the nature of the experiment. Furthermore, the data that I provide will be anonymous and my identity will not be revealed without my permission. Finally, I shall be given an opportunity to ask questions prior to the start of the experiment and after my participation is complete.

Signature: _____

(Printed): _____

Date: _____

PAR-Q

PHYSICAL ACTIVITY READINESS QUESTIONNAIRE

1. NAME: _____ 2. SPORT/ACTIVITY: _____

3. ADDRESS: _____ CITY: _____

POSTAL CODE: _____ PHONE: _____

4. SEX: M _____ F _____

5. AGE: _____ BIRTHDATE: _____

6. PLACE OF BIRTH: _____

Common sense is your best guide in answering these few questions. Please read them carefully and check (✓) the ☐ YES ☐ NO opposite the question if it applies to you.

YES	NO	
☐	☐	1. Has your doctor ever said you have heart trouble?
☐	☐	2. Do you frequently have pains in your heart and chest?
☐	☐	3. Do you often feel faint or have spells of severe dizziness?
☐	☐	4. Has a doctor ever said your blood pressure was too high?
☐	☐	5. Has your doctor ever told you that you have a bone or joint problem such as arthritis that has been aggravated by exercise, or might be made worse with exercise?
☐	☐	6. Is there a good physical reason not mentioned here why you should not follow an activity program even if you wanted to?
☐	☐	7. Are you over age 65 and NOT accustomed to vigorous exercise?

THE UNIVERSITY OF ALBERTA

FACULTY OF PHYSICAL EDUCATION AND RECREATION

HEALTH ACTIVITY AND LIFESTYLE QUESTIONNAIRE

SUMMER 1986

INSTRUCTIONS

Please fill out ALL information as accurately and completely as possible. Any questions needing clarification can be identified and we will assist you at the Testing Centre. ALL information you give is completely CONFIDENTIAL.

HEALTH: Please check the appropriate boxes (✓).

A. Marital Status at present:

☐ Married ☐ Single ☐ Widowed ☐ Divorced/Separated

B. Whom do you live with?

☐ Spouse ☐ Alone ☐ Friend ☐ Children ☐ Other

C. Where do you live?

☐ Big City ☐ Town ☐ Farm ☐ Rural Home

-3-

D. Type of Accommodation?

☐ House ☐ Normal Apartment ☐ Seniors Res. ☐ Nursing Home ☐ Trailer

☐ Other

Number of Years in this particular residence? _____

E. How long have you lived in Alberta?

☐ Less than 5 years ☐ 5 - 10 years ☐ 11 - 20 years ☐ More than 20 years

☐ All of my life

F. FAMILY: How many children do you have?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 or more

Is your mother alive? ☐ Yes Her Age: _____ ☐ No

If not, cause of death? _____ Age At Death: _____

Is your father alive? ☐ Yes His Age: _____ ☐ No

If not, cause of death? _____ Age At Death: _____

G. EDUCATIONAL LEVEL: What is your educational level? Please check all that apply.

Grade School

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12

Vocational Training Type: _____

Please check the number of years that apply.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more

University - Type of Undergraduate Degree: _____

Please check the number of years that apply.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more

Type of Graduate Degree: _____

Please check the number of years that apply.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 or more

H. OCCUPATION

Your main occupation/profession is (was): _____

How many years have you spent in your occupation?

☐ 1-9 Years ☐ 10-19 Years ☐ 20-29 Years ☐ 30-39 Years ☐ 40-49 Years

☐ More than 50 years

Are you retired from your occupation? ☐ Yes ☐ No ☐ Part-time

If retired or part-time working, how long have you NOT been working full-time.

☐ 1-5 Years ☐ 6-10 Years ☐ 11-15 Years ☐ More than 15 Years

Please describe your usual daily activity status. Please check (✓) the appropriate description.

☐	☐	☐	☐	☐
Sleeping, Resting	Mostly sitting Some standing activity with very little walking.	Mostly standing with some walking and a few vigorous activities.	Mostly walking or standing requiring strength. Some vigorous activity, very little sitting.	Mostly walking & standing requiring much strength endurance and employing many vigorous activities.

Do you feel that your life-work was emotionally stressful?

☐ Frequently ☐ Occasionally ☐ Rarely ☐ Never

I. TRANSPORTATION / MOBILITY

How do you usually get around? Check all that apply.

☐ Walk ☐ Wheelchair/DATS ☐ Bus ☐ Taxi ☐ Car Passenger ☐ I drive a car

Do you currently hold a driver's license? ☐ Yes ☐ No

J. MEDICAL

Do you see a doctor ..... ?

☐ Every few years ☐ Once a year ☐ Twice a year ☐ More than twice year

Are your teeth satisfactory for chewing? (Can you eat fresh fruits, vegetables and meat?)

☐ Yes ☐ No

Do you wear dentures? ☐ Yes ☐ Partial Dentures ☐ No

How do you rate your general health?

☐ Excellent ☐ Good ☐ Fair ☐ Poor

List any major illnesses that have caused you a set-back in health in the past.

List any illnesses that seem to run in your family.

HOW MANY DIFFERENT medications are you taking on a regular basis?

Prescription _____

Non-Prescription _____

Do you take any of the following? If yes, check as many as apply.

Aspirin/Tylenol	____	Nerve Pills	____
Tums/Maalox	____	Water Pills	____
Blood Pressure Pills	____	Heart Pills	____
Hormones	____	Cold/Allergy Pills	____
Laxatives	____	Thyroid Pills	____
Sugar/Diabetic Pills	____	Sleeping Pills	____
		Other	____

What medical problems, if any, are you CURRENTLY concerned about?

Please describe your vision:

☐ Good with no glasses ☐ Glasses for reading ☐ Bifocal glasses ☐ Poor with glasses ☐ Partially blind

Please describe your hearing:

☐ Good with no aid ☐ Some hearing loss, no aid ☐ Hearing aid ☐ Poor hearing even with aid

Please describe your night-time sleep habits:

☐ Solid 6-8 hours ☐ Occasional wakefulness ☐ Restless

Do you smoke? ☐ No If no, please disregard the next two questions.

☐ Yes If yes, please check all that apply.

☐ Cigarettes ☐ Cigar / Cigarillo ☐ Pipe

Cigarettes:

☐ No ☐ A few cigarettes daily ☐ Half pack a day ☐ Full pack a day ☐ More than a pack a day

Cigars / Cigarillos - How many per day? _____

Pipes - How many per day? _____

If you have stopped smoking, please indicate how many years in total <u>that you DID smoke</u>.

☐ No ☐ 1-10 Years ☐ 10-20 Years ☐ 20-30 Years ☐ 30-40 Years ☐ 40-50 Years

Do you drink alcohol?

☐ Never ☐ 1-3 times a month ☐ 1-3 times a week ☐ 4-7 times a week ☐ More than once a day

Do you normally wear seat-belts when in a car? ☐ Yes ☐ No

K. ACTIVITY / FITNESS - Current Characteristics

What do you feel about your weight?

☐ Too heavy (15 or more lbs. over) ☐ A bit overweight (5-15 lbs. over) ☐ Just right (within 5 lbs. of ideal) ☐ Need to gain weight (5-15 lbs. under)

Do you do VIGOROUS exercises for 15 to 30 minutes at least three times per week? (Examples - continuous swimming, brisk walking, jogging or dancing).

☐ Yes ☐ I do some activity, but not this much ☐ No

Do you do casual or quieter activities several times per week that probably enhance your fitness (examples include yoga, gardening, leisurely walks, mild exercises).

☐ Yes ☐ Occasionally ☐ Rarely

Do you look for ways to build fitness activities into your life?
(Examples - Walk to work or the store, take stairs instead of an elevator).

☐ Yes ☐ Occasionally ☐ No

I believe exercise is important to my health.

☐ Yes ☐ Somewhat ☐ No

Comparing yourself to others of your own age, would you say that you are...

☐ More Fit ☐ As Fit ☐ Less Fit

What physical activities would you like to start in order to improve your fitness and health?

_____

_____

_____

Have you ever participated in the Alberta Seniors Games?

☐ Yes ☐ No If yes, list others:

EVENT	YEAR

Have you ever participated in ANY major Sport Games or Championships?

☐ Yes ☐ No If yes, please list:

EVENT	YEAR

L. ACTIVITY / FITNESS - Past Involvement

I participated in sports in my youth.

☐ Intensively ☐ Frequently ☐ Rarely ☐ No

I have been in good physical shape.

☐ Most of my life ☐ Part of my life ☐ Occasionally ☐ R...

List the physical activities and sports you enjoyed in your younger years along with the level of participation (community recreation, school, university, amateur, professional, master's).

ACTIVITY / SPORT	LEVEL

List the physical activities and sports that you enjoy NOW and the level of participation.

ACTIVITY / SPORT	LEVEL

List the physical activities and sports that you have discontinued recently.

ACTIVITY / SPORT	REASON FOR DISCONTINUING

M. LIFESTYLE / NUTRITION

How many meals do you eat each day?

☐ One ☐ Two ☐ Three ☐ Four ☐ Five

Do you eat snacks as part of your normal diet?

☐ No ☐ Once a day ☐ Twice a day ☐ More than twice a day

List examples of snacks: _____

_____

Check as many as apply ONLY for your USUAL morning meal.

☐ I don't eat breakfast.

☐ Coffee ☐ Tea ☐ Postum

☐ Fresh fruit ☐ Fruit juice

☐ Hot cereal ☐ Cold Cereal

☐ Toast

☐ Bacon ☐ Sausage ☐ Ham

☐ Egg

☐ Pancakes ☐ French toast ☐ Potatoes

☐ Milk ☐ Hot chocolate

Others (Please list): _____

_____

_____

_____

Do you eat whole grain cereals and a high fibre diet? ☐ Yes ☐ No

Do you use salt in your diet?

☐ Yes, liberally ☐ I use salt substitute liberally ☐ I use salt in moderation ☐ Very limited

Do you eat the fatty portions of meat and poultry? ☐ Yes ☐ No

Do you normally have fried or deep fried foods ..... ?

☐ Two or more a day ☐ Once a day ☐ 4-7 times a week ☐ 1-3 times a week ☐ Rarely

Do you normally have a sweet dessert?

☐ Two or more a day ☐ Once a day ☐ 4-7 times a week ☐ 1-3 times a week ☐ Rarely

When you add sweetness, do you use ..... ?

☐ Sugar ☐ Honey ☐ Artifical Sweetener

Do you consider yourself to have a sound and nutritious diet?

☐ Always ☐ Most of the time ☐ Some of the time ☐ Rarely

How could your diet be improved? _____

_____

N. LIFESTYLE / FEELINGS

Do you appreciate the body you have and try to take care of it?

☐ Often ☐ Occasionally ☐ Rarely

Do you feel energetic?

☐ Often ☐ Occasionally ☐ Rarely

Do you feel financially secure?

☐ Yes ☐ Partially ☐ No

Has life been good to you?

☐ Yes ☐ Partially ☐ No

Are your goals for the future clear?

☐ Yes ☐ Partially ☐ No

Do you have holidays or special events in the near future that you are looking forward to?

☐ Yes ☐ Partially ☐ No

Do you currently feel wanted and useful?

☐ Often ☐ Occasionally ☐ Rarely

Is loneliness a problem for you?

☐ Often ☐ Occasionally ☐ Rarely

Does your family give you emotional support?

☐ Often ☐ Occasionally ☐ Rarely

Please comment: _____

Do your friends give you emotional support?

☐ Often ☐ Occasionally ☐ Rarely

Please comment: _____

Do you feel sorry for yourself?

☐ Often ☐ Occasionally ☐ Rarely

Please describe your temperment.

☐ Always even tempered ☐ Usually even tempered ☐ Somewhat short tempered ☐ Very short tempered

Do you cope with the stresses of aging well?

☐ Yes ☐ Partially ☐ No

Are you planning any new projects / activities / trips?

☐ Yes ☐ Partially ☐ No

Please specify: _____

_____

How much T.V. do you watch per day?

☐ One hour or less ☐ One to two hours ☐ Two to four hours ☐ More than four hours

What are your favorite T.V. programs? _____

_____

How much reading do you do each day?

☐ One hour or less ☐ One to two hours ☐ Two to four hours ☐ More than four hours

What do you normally enjoy reading?

☐ Newspapers, news Magazines (Time, Newsweek) ☐ Non-fiction books (History, Auto-biography, Manuals) ☐ Fiction Books ☐ Magazines ☐ Other _____

Do you feel your memory of past events is good?

☐ Yes ☐ Partially ☐ No

Do you feel your memory of recent events is good?

☐ Yes ☐ Partially ☐ No

The WORST thing about getting old is: _____

_____

_____

The BEST thing about getting old is: _____

_____

_____

Are you looking forward to the future?

☐ Yes ☐ Partially ☐ No

Why or why not? _____

_____

Are you satisfied with your current lifestyle?

	Most of the time	Some of the time	Rarely
Socially	☐	☐	☐
Emotionally	☐	☐	☐
Physically	☐	☐	☐
Mentally	☐	☐	☐
Spiritually	☐	☐	☐

What ONE thing to you wish to accomplish in the near future? _____

_____

_____

What do you want to be remembered for? _____

_____

_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!
YOUR ASSISTANCE WILL GO A LONG WAY IN PROVIDING
UNDERSTANDING ABOUT THE LIVES OF ALBERTA'S SENIORS.

PLEASE RETURN THIS QUESTIONNAIRE AT YOUR APPOINTED TIME TO:

Research Team
Grande Prairie College
Main Building, Room ~~F-258~~ E-121
GRANDE PRAIRIE, Alberta

In return for your participation in the study we have a special souvenir for you.

APPENDIX B

4) Appraisal Procedures

3.6 Preliminary Instructions to the Participant

In order to achieve standardization and ease of measurements, the following information should be provided in writing to the participant at least 48 hours prior to the testing session.

Dress Requirements: Shorts and short sleeved or sleeveless shirt/blouse should be worn by the participant.

Food and Beverages: It is recommended that the participant not eat for at least two hours before taking the appraisal. The participant should also refrain from drinking caffeine beverages for two hours and alcoholic drinks for six hours prior to the appraisal.

Smoking: The participant should not smoke during the two hours prior to the appraisal.

Exercise: Exercise should be avoided for six hours prior to the appraisal.

If the above conditions are not adhered to the participant should be advised that the results of the tests may be affected negatively.

PAR-Q Consent and Release Form: The PAR-Q (see Appendix B) must be completed and the consent and release form (see Appendix C) read, understood and duly signed prior to the administration of the CSTF.

Pregnancy: Pregnant women must obtain the consent of their doctor before participating in the CSTF. It should be noted that there will be some bias in the results of pregnant participants since the CSTF norms and percentiles were developed excluding pregnant women.

4.1 Tests and Measurements

The following is an outline of the tests and measurements of the Canadian Standardized Test of Fitness. The given sequence has been chosen in order to:

a) prevent high risk individuals from participation in maximal effort, and
b) minimize skinfold measurement errors which might be caused by body perspiration.

- Pre-Test Screening
  - PAR-Q (Physical Activity Readiness Questionnaire) (see Appendix B)
  - Consent and Release Form (see Appendix C)
  - Observations (see CSTF Data Sheet - Appendix D)
  - Resting Heart Rate Measurement
  - Resting Blood Pressure Measurement (see Appendix E - Blood Pressure Messages Flow Chart)
  - Lifestyle Questionnaire (see Appendix F) - optional
- Anthropometry
  - Standing height
  - Body weight
  - Girths: chest, waist (abdomen), hip (gluteal), right thigh
  - Skinfolds: triceps, biceps, subscapular, iliac crest, medial calf
- Aerobic Fitness
  - Canadian Aerobic Fitness Test
  - Post-Exercise Heart Rate
  - Post-Exercise Blood Pressure
- Muscular Strength, Flexibility and Muscular Endurance
  - Grip strength: right plus left hand
  - Push-ups
  - Trunk forward flexion
  - Sit-ups (60 seconds)
- Appraisal Report
  - Interpretation of results
  - Exercise Prescription Counselling

4.2 Pre-Test Screening

The screening section consists primarily of five parts. The optional Lifestyle Questionnaire, although not a screening device, may be conveniently administered during this phase of the overall process.

- PAR-Q
- Consent and Release Form
- Observations
- Resting Heart Rate Measurement
- Resting Blood Pressure Measurement
- Lifestyle Questionnaire

4.2.1 PAR-Q (The Physical Activity Readiness Questionnaire)

The PAR-Q (see Appendix B) has been designed to identify those individuals for whom certain physical activities might be inappropriate and or those who should receive medical advice pertaining to the type of activity most suitable for them.

In particular, persons who suffer from cardio-pulmonary diseases or other ailments which could be aggravated by exercise testing should not be tested unless medical authorization and supervision is provided.

The PAR-Q must be administered without interpretation, although the following are some terms that may need clarification *IF* the respondent asks:

- "Heart Trouble": a deliberately broad term used to include heart attacks, angina, congenital heart disease, heart valve disease, congestive heart failure, dropsy and the use of heart medications.
- "Dizziness": frequently referred to as "lightheadedness". It is usually associated with the sensation or feeling of instability.
- Terms such as "frequently" and "often" have been purposely used in an attempt to identify the respondents for whom the fitness appraisal is inappropriate. Some individuals will have difficulty in dealing with these terms. It is very important that the appraiser not interpret the participants symptoms. The appraiser should help the participant answer the questions by asking that he/she make the judgement on their own. This is very important from a legal point of view.

- If the participant refuses to answer any question on the PAR-Q, she/he will not be allowed to undergo the CSTF.

- If the response to any of the questions on the PAR-Q is "yes", the participant should not, as a rule, perform the active portion of the CSTF, i.e., the CAFT sit-ups, grip strength and push-ups.

In addition, these tests should not be performed if the participant suffers from bone or joint problems which could be further aggravated by these exercises.

4.2.2 Consent and Release Form

The [illegible] form [illegible] Appendix [illegible] read [illegible] and duly signed prior to the administration of the CSTF. This will ensure that the participant clearly understands the nature and procedures of the CSTF and what his/her responsibilities are with respect to the performance of the tests. This form makes it clear that a participant can refuse to perform any test and also can and should stop performing a test whenever any significant discomfort is experienced.

- **Individuals under the age of majority and living with a parent/guardian must have the "youth consent and release form" and the PAR-Q completed and signed by the parent/guardian. These must then be submitted to the appraiser at the time of testing.**
- **Both the youth and adult consent and release forms must be witnessed at the time of signing. The witness must be of the age of majority and should be independent of the organization administering the test. Hence, the appraiser is *not* an appropriate witness.**

The signed consent and release form is the appraiser's evidence to substantiate that the participant was fully aware of all implications prior to undertaking the CSTF. However appraisers should appreciate that this form does not absolve them of negligence in the administration of the CSTF.

4.2.3 Observations

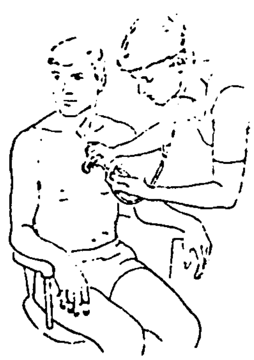
In order to further determine the readiness of an individual to participate in the CSTF, the appraiser should also note the following observations.

The CSTF should be cancelled or postponed if the participant

- is pregnant (ask all females) and does not have the consent of her physician.
- demonstrates difficulty breathing at rest
- coughs persistently
- has lower extremity swelling
- is currently on medication.
- has clearly ignored the preliminary instructions (e.g., has just eaten a heavy meal, has alcohol on breath, etc.)
- for any other reason, not mentioned here, which the appraiser believes will predispose the participant to unnecessary discomfort or risk.

4.2.4 Resting Heart Rate Measurement

Equipment: Stethoscope, timer or stop watch



Procedure

The participant must sit in a comfortable chair with arm supports and rest with the feet flat on the floor for at least five minutes before the resting heart rate is measured. The stethoscope should be positioned so the earpieces point forward. To monitor the heart rate, it is recommended that the diaphragm of the stethoscope be placed either on the sternum or over the second intercostal space on the left side. Determine the resting heart rate using a 15 second count and record in beats-per-minute in the space provided on the CSTF Data Sheet.

- **In the event that the resting heart rate is 100 beats/minute or more, wait an additional five minutes (have participant sit quietly) and take the readings again.**
- **A PARTICIPANT SHOULD NOT BE PERMITTED TO TAKE THE AEROBIC AND MUSCULAR ENDURANCE TESTS IF the resting heart rate is 100 beats/min. or more after two readings.**

If this is the case, explain briefly to the participant that the heart rate reading is not within the range for which the test was designed. The appraiser may suggest that the participant mention their elevated resting heart rate during their next visit with their physician.

4.2.5 Resting Blood Pressure Measurement

Equipment: Chair with arm supports, stethoscope, sphygmomanometer (blood pressure cuffs)

Procedure

Following the resting heart rate measurement, choose the appropriate size of blood pressure cuff and apply the cuff to the participant's left arm. The cuff should be wrapped firmly and smoothly around the arm with the lower margin two to three centimetres above the antecubital space. The arm should be comfortably supported at an angle of 10 to 45 degrees from the trunk with the lower edge of the cuff at heart level. Locate and note the brachial artery at the antecubital space by palpation. The stethoscope should be positioned so that the earpieces point forward.

Rapidly inflate the cuff to a level 20 to 30 mmHg above the radial palpatory pressure. Quickly position the diaphragm of the stethoscope over the brachial artery. Apply a minimum amount of pressure so as not to distort the artery. The diaphragm should be in complete contact with the skin. The stethoscope should not touch the cuff or its tubing. Release the cuff pressure at a rate of approximately two mm-per-second.

The SYSTOLIC PRESSURE is determined by the first perception of sound (first Korotkoff sound).

The DIASTOLIC fourth-phase level (D4) is determined when the sounds cease to be tapping in quality and are fully muffled. Deflate the cuff to zero pressure.

Record the Resting Systolic and Diastolic fourth phase (D4) to the nearest two mmHg in the appropriate space on the CSTF Data Sheet

- In the event that the Resting Systolic Blood Pressure is 150 mmHg or more and or the Resting Diastolic Blood Pressure is 100 mmHg or more, wait an additional five minutes (have participant sit quietly) and take the readings again
- A PARTICIPANT SHOULD NOT BE PERMITTED TO TAKE THE AEROBIC AND MUSCULAR STRENGTH AND ENDURANCE TESTS IF
  - a) the resting systolic blood pressure measurement is 150 mmHg or more after two readings,
  - b) the resting diastolic blood pressure is 100 mmHg or more after two readings, or
  - c) the individual is receiving medication for high blood pressure

If any of the above conditions exist explain briefly that the blood pressure reading is not within the range for which the test was designed (see Appendix E- Blood Pressure Messages Flow Chart for potential interpretation)

4.2.6 Lifestyle Questionnaire (optional)

The lifestyle questionnaire may assist the appraiser in assessing participant attitudes toward and interests in physical activity This can be very helpful in determining appropriate subsequent results interpretation counselling and exercise prescription For further information on how the appraiser may make best use of the participants responses in the lifestyle questionnaire, see the CSTF Interpretation and Counselling Manual

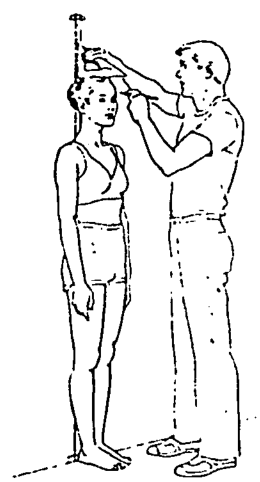
4 3 Anthropometric Measurements

4 3 1 Standing Height

Equipment Metric wall tape measuring tape, set square wooden board

Procedure

Position the tape vertically against a wall Ensure that it is perfectly straight and even with the floor If the floor is carpeted place a half-inch wooden board on the floor against the wall and measure from the top of the board with participant standing on it



The participant, without footwear stands erect, arms hanging by the sides, feet together, the heels and back in contact with the wall The participant is then instructed to look straight ahead stand as tall as possible and take a deep breath while the measurement is taken

The set square is placed on the head depressing the hair to make firm contact and a mark is made at the level of the lower border of the square on the wall Check to ensure that the participants heels remain in contact with the floor The distance from the floor to the pencil mark is recorded to the nearest 0 5 cm

e g |1|7|6.5|

4 3 2 Body Weight

Equipment Spring or beam scale wooden board

Procedure

Ensure the scale is on a flat surface If the floor is carpeted, use a half-inch wooden board under the scale. The participant [illegible] without footwear and [illegible] shorts and [illegible]

Record the weight in kg to the nearest 0.1 kg e g |0|6|7.2|

4 3 3 Girth Measurements

Equipment K-E Anthropometric tape or equivalent

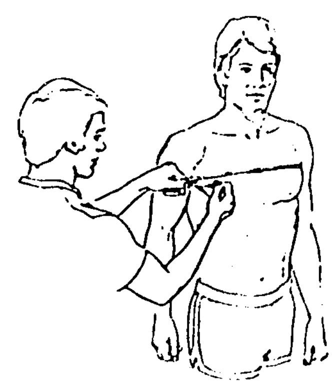
Procedure

The participant stands erect in a relaxed manner arms hanging loosely at the sides The appraiser holds the tape between the thumbs and index fingers with the second finger is stabilizing and leveling the tape A cross handed technique is used to bring the zero line of the tape in line with the measuring aspect of the tape

Ensure the tape is properly located in the horizontal plane in accordance with the instructions and illustrations listed below

Apply tension to the tape sufficient to maintain its position but not to cause indentation of the skin surface

All measurements are recorded to the nearest 0 1 cm e g |0|9|8.7|cm

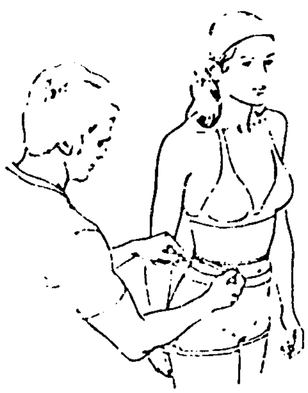


a) Chest Girth

Have the participant raise both arms and pass the tape around the chest positioned at the level of the mesosternale (approximately at the mid level of the sternum midway between the axilla and the horizontal nipple line) Ensure the tape is perfectly horizontal The participant lowers both arms so that they hang relaxed The reading is taken at the end of a normal expiration

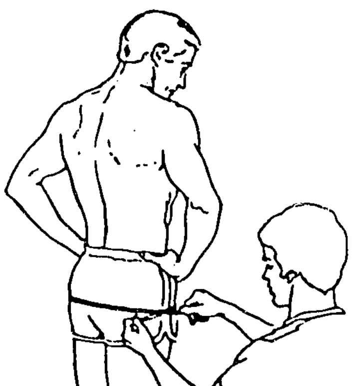
b) Waist (Abdomen) Girth

The participant stands erect. The [illegible] the tape horizontally at the level of noticeable waist narrowing. The tape is then placed in the recording position and the measurement is made at the end of a normal expiration. In some participants an indeterminate waist can be approximated by taking the girth at the estimated lateral level of the twelfth or lower floating rib.



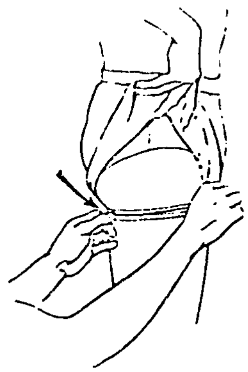
c) Hip (Gluteal) Girth

The participant stands erect with feet together. The tape is positioned around the hips at the level of the symphysis pubis and the greatest gluteal protuberance.



d) Right Thigh Girth

The participant stands erect, feet slightly apart. The tape is positioned around the right thigh to a level one centimeter below the gluteal line.



4.3.4 Skinfold Measurements

See section 5.2 : BODY WEIGHT, ADIPOSITY AND FAT DISTRIBUTION (regarding use of the skinfold measurements).

Equipment: Harpenden or Lange Calipers

Do one complete round of all the skinfold measurements before repeating the procedure to obtain a second skinfold measurement for each site. All measurements are taken only on the right side of the body.

General Procedure

During skinfold measurements, it is essential that the participant relax the underlying musculature as much as possible. When the site of the skinfold has been determined, a fold of skin plus the underlying fat is grasped between the thumb and forefinger with the back of the hand facing the appraiser. Keeping the jaws of the calipers always at right angles to the body surface, the contact faces of the calipers are placed one centimeter below the point where the skinfold is raised. While maintaining the pressure of the fingers on the skinfold the trigger of the calipers is fully released and the measurement is taken. The measurement is noted when the indicator stabilizes which is approximately two seconds after the full pressure of the caliper jaws is applied to the skinfold. The reading is recorded to the nearest 0.2 millimetres e.g. |1,6.8| mm

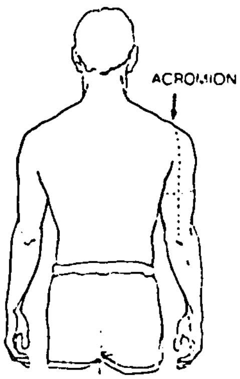
Complete the first set of skinfold measurements for all sites. Then repeat the procedure to obtain a second set of measurements for each skinfold site. Record the mean of the two measures unless the difference between the first and second measure of that particular skinfold site is found to be greater than 0.4 mm. If so, take a third measure of that skinfold site and choose from among the three values the two measures which most closely match each other in value. Determine the mean of those two measures. Should the three measures be equidistant: e.g., 18.6 19.2 19.8 determine the mean of all three values.

It should be noted that the accuracy of skinfold measurements depends on:

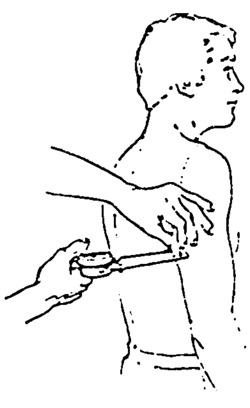
- **precise identification of the site of the skinfold;**
- **forming the skinfold prior to the application of the caliper jaws;**
- **the standardization of the alignment of the skinfold crest;**
- **maintenance of the pressure by the fingers on the skinfold when the measurement is taken;**
- **complete release of the caliper jaws.**

a) Triceps Skinfold

The participant stands with the arms relaxed by the sides. The triceps skinfold is taken on the back of the right arm at the point midway between the tip of the acromion (right shoulder) and the tip of the olecranon (right elbow). The midpoint is determined by placing the fifth finger of the left hand on the tip of the acromion (right shoulder), the fifth finger of the right hand on the tip of the olecranon (right elbow) and then the thumbs are placed together to determine the mid-point.

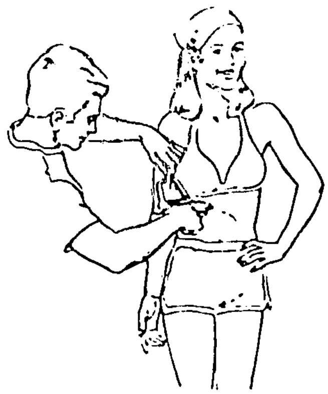


The skinfold is then raised at the mid-arm point so the fold runs vertically along the midline of the back of the arm.



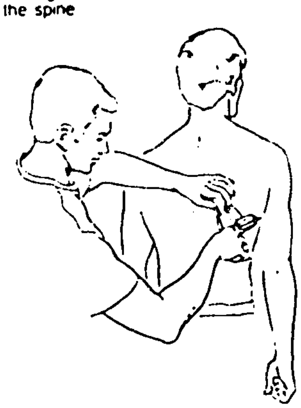
b) Biceps Skinfold

The biceps skinfold is measured on the right extended upper arm over the biceps at the same level as the mid-arm point for the triceps. The skinfold is then raised at the mid-arm point so the fold runs vertically along the midline of the front of the arm.



c) Subscapular Skinfold

The participant stands with the shoulders relaxed and the arms by the sides. The skinfold is raised so it can be measured on a diagonal line coming from the vertebral border of the scapula to a point 1 cm beneath the inferior angle. The skinfold runs downward and outward at an angle of approximately 45 degrees to the spine.



c) Iliac Crest Skinfold

The participant stands in a normal erect position. Have the participant raise the right arm to the side so that it is horizontal and place the right hand on the right shoulder. If the participant is unable to place hand on shoulder, keep the horizontal arm extended. The skinfold is then measured three centimetres above the crest of the ilium at the midline of the body, so that the fold runs forward and slightly downward.

e) Medial Calf Skinfold

Have the participant place the unweighted (relaxed) right foot flat on a step so that the knee is at 90°. The skinfold is raised on the inside of the right calf just above the level of the maximum calf girth so that the fold runs vertically along the midline.

4.4 Aerobic Fitness – Canadian Aerobic Fitness Test

(See Section 5.3 - PREDICTION OF MAXIMAL AEROBIC POWER (VO_2 MAX))

The aerobic component of the CSTF consists of the administration of the Canadian Aerobic Fitness Test (CAFT) and measurements of post-exercise heart rate and blood pressure

The CAFT (formerly known as the Canadian Home Fitness Test Advanced Version) consists of a series of stepping sequences performed on double 20.3 cm steps to a six-count musical rhythm set by a cassette tape with progressive increase in tempo

The CAFT is structured such that a participant begins by performing a three minute "warm-up" exercise at a cadence intensity of 65 to 70 per cent of the average aerobic power expected of a person ten years older Instructions and time signals are given by the cassette tape as to when to start and stop exercising and for the counting of the 10 second measurement of the post-exercise heart rate

If a predetermined ceiling post-exercise heart rate is not attained or exceeded, the participant performs a further three minutes of exercise at 65 to 70 per cent of the average aerobic power expected for his/her age group Again, if the participant does not attain or exceed the ceiling heart rate, a further three minutes of stepping is performed at an intensity equivalent to 65 to 70 per cent of the average aerobic power for a person ten years younger

Equipment. Stethoscope, sphygmomanometer, ergometer steps, CAFT cassette tape cassette recorder, timer or stopwatch, masking tape and metronome (for calibration of cassette)

Procedure

Verify that the pre-test screening items have been completed, i.e., PAR-Q consent and release form observations, resting blood pressure and resting heart rate

Briefly explain the purpose of the CAFT and how it is conducted

Apply the blood pressure cuff to the participant's left arm The cuff should be wrapped firmly and smoothly around the arm with the lower margin two to three centimeters above the antecubital space It is suggested that the participant wear the cuff throughout the step test If it tends to slip tape it to the upper arm or shoulder with masking tape

Determine the starting stage for the participant Based on current age and sex using the following table

AGE	STARTING STAGE MALES	FEMALES
60-69	1	1
50-59	2	1
40-49	3	2
30-39	4	3
20-29	5	3
15-19	5	4

The appraiser should have the participant perform mild calf stretches before and after the stair stepping as a prevention for muscle cramping

Stepping Exercise Sequence

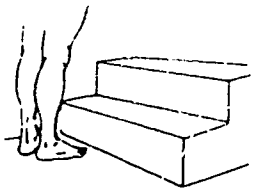
Demonstrate and have the participant practice the stepping sequence as described below If handrails are not available on the ergometer steps the appraiser should step with older participants as a precaution against falls

Have the participant practice the stepping sequence first without the music and then with the music but not more than twice each time Ensure that the participant places both feet completely on the top step that the legs are completely extended and the back upright during this phase of the movement

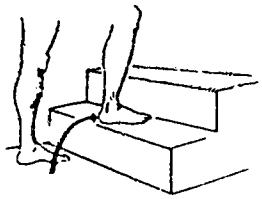
Also ensure that the participant maintains the proper cadence Count and/or step a few steps with any participant who is experiencing difficulty

A participant may start stepping with either foot The example given begins with the right foot Reverse right and left in the example if the participant prefers to begin with the left foot

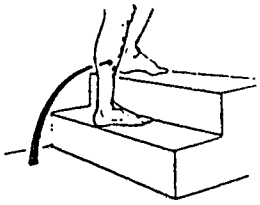
Stepping Sequence
Stand in front of the first step with feet together



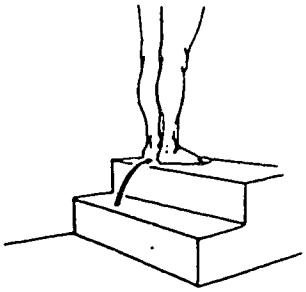
1 STEP
Place your right foot on the first step



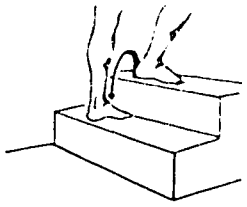
2 STEP
Place your left foot on the second step



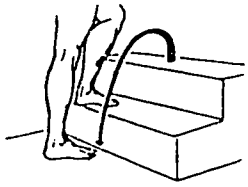
3 UP
Place your right foot on the second step so feet are together



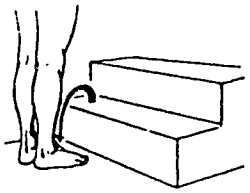
4 STEP
Start over with left foot on the right step



5 STEP
Place your right foot on ground level



6 DOWN
Place your left foot down on ground level so feet are together



STEP - STEP - UP!

STEP - STEP - DOWN!

UP - 2 - 3! DOWN - 2 - 3!

UP - 2 - 3! DOWN - 2 - 3!

Inform the participant that the first stepping session lasts three minutes. When the music stops, the participant will cease to step and remain motionless. Indicate that you will then inform the participant whether or not to proceed to the second session of stepping depending on their heart rate response. If the participant is to proceed, explain that this procedure will be repeated at the end of the second session.

Indicate that the participant should feel free to stop stepping anytime if any discomfort is experienced.

Discontinue the step test if the participant begins to stagger, complains of dizziness, extreme leg pain, nausea, chest pain, or shows facial pallor. Have the participant lie down in a supine position and check his/her heart rate and blood pressure.

If it becomes obvious that the participant is unable to maintain the proper cadence after the first minute of stepping, step with the participant or maintain the rhythm by clapping.

If the difficulty in stepping appears to be related to some physiological dysfunction, discontinue the test.

When the music stops have the participant remain motionless, while standing. Determine the post-exercise heart rate with the stethoscope placed either on the sternum or over the second intercostal space on the left side. Start counting the pulse at the termination of the command word "COUNT" and continue counting until the first sound of the command word "STOP". This is a 10 second timing sequence and the first beat is counted as one.

Do not count a heart beat which occurs during the command word "COUNT". In such cases, the next heart beat is counted as one.

The determination of an accurate post-exercise heart rate is the critical measurement for deciding if the participant should continue to the next session and for predicting aerobic fitness or maximum oxygen consumption (VO_2 Max). Quickly ascertain whether the participant is to continue or stop the test. The participant DOES NOT continue if the heart rate is EQUAL TO or EXCEEDS the ceiling post-exercise heart rate (see chart).

If there are no contraindications, have the participant complete the second session. Repeat the post-exercise heart rate measurement. Determine if the participant is to continue for a third session. The participant may complete a maximum of three stepping sessions.

ALL THOSE AGED 60 to 69 YEARS STOP STEPPING AFTER THE SECOND SESSION.

CEILING POST-EXERCISE HEART RATES

AGE	HEART RATES (10 seconds)	
	After 1st Session	After 2nd Session
60–69	24	–
50–59	25	23
40–49	26	24
30–39	28	25
20–29	29	26
15–19	30	27

After the participant completes the last session of stepping, determined by the post-exercise heart rate response, have him/her sit down. Once seated, if the participant appears fatigued or lightheaded, elevate the legs to rest on the ergometer steps.

Record the post-exercise systolic and diastolic (D4) blood pressure readings
- between 0:30 and 1:00 minute
- between 2:30 and 3:00 minutes

Measure and record the post exercise heart rate again between 3:00 and 3:30 (15 second count).

The above post-exercise measures are taken after the last session is completed to ensure that the heart rate and blood pressure drop below the resting ceiling levels before the participant leaves the site, i.e., heart rate less than 100 beats/minute, systolic blood pressure less than 150 mmHg, diastolic blood pressure less than 100 mmHg.

See Appendix H for CAFT Summary Chart.

4.5 Muscular Strength, Flexibility, Muscular Endurance

In order to minimize the possibility of injury and avoid undue strain, selective verbal encouragement is provided to the participant in the CSTF. Examples of acceptable words or phrasing might be "good", "you are doing fine". Unacceptable phrasing would be "keep going", "do one more". These motivational cues should be standardized from test to test so as to prevent a motivational bias in test/re-test comparisons.

4.5.1 Grip Strength

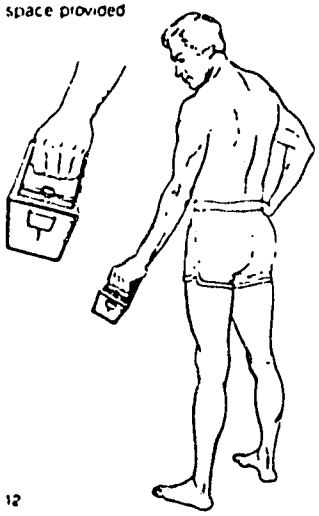
Equipment: Hand dynamometer

Procedure

Have the participant grasp the dynamometer in the appropriate hand. The grip is taken between the fingers and the palm at the base of the thumb. Adjust the grip of the dynamometer so the second joint of the fingers fits snugly under the handle and takes the weight of the instrument. Lock the grip in place. The participant holds the dynamometer in line with the forearm at the level of the thigh. The dynamometer is then squeezed vigorously so as to exert maximum force.

Have the participant exhale while squeezing (to avoid build-up of intra-thoracic pressure).

During the test neither the hand nor the dynamometer should touch the body or any other object. Measure both hands alternatively allowing two trials per hand. Record the scores for each hand to the nearest kilogram. Combine the maximum score for each hand and record in the space provided.



4.5.2 Push-Ups

Equipment: Gym mat

A PERSON WHO SUFFERS FROM LOWER BACK AILMENTS SHOULD NOT PERFORM THIS TEST.

Procedure

It is imperative that the participant is well instructed in the correct performance of the push-up.

Males

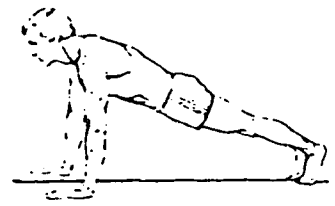
The participant lies on his stomach, legs together. His hands, pointing forward, are positioned under the shoulders. The participant pushes up from the mat by fully straightening the elbows and using the toes as the pivotal point.

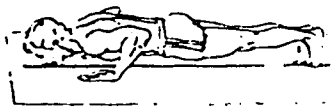
The upper body must be kept in a straight line. The participant returns to the starting position, chin to the mat. Neither the stomach nor thighs should touch the mat.

Females

The participant lies on her stomach, legs together. Her hands, pointing forward, are positioned under the shoulders. The participant pushes up from the mat by fully straightening the elbows and using the knees as the pivotal point.

The upper body must be kept in a straight line. The participant returns to the starting position, chin to the mat. The stomach should not touch the mat. The lower legs remain in contact with the mat, ankles plantar-flexed.





THE PUSH-UPS ARE TO BE PERFORMED CONSECUTIVELY AND WITHOUT A TIME LIMIT.

Have the participant practice one or two repetitions to check for proper technique.

Advise the participant that incorrect repetitions, those not meeting the above criteria, will not be counted. The test is stopped when the participant is seen to strain forcibly or is unable to maintain the proper push-up technique over two consecutive repetitions. The participant should also be advised to avoid breath-holding by breathing rhythmically and to "exhale on effort", i.e., exhale during upward phase of the push-up.

4.5.3 Trunk Forward Flexion

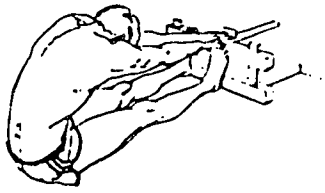
Equipment: Flexometer (Modified Wells and Dillon)

A PERSON WHO SUFFERS FROM LOWER BACK AILMENTS SHOULD NOT PER FORM THIS TEST

Procedure

Have the participant warm-up for this test by performing slow stretching movements (modified hurdle stretch held for 20 seconds repeated twice on each leg) before taking the actual measurements

The participant, barefoot, sits with legs fully extended with the soles of the feet placed flat against the two horizontal crossboards of the flexometer. The flexometer should be adjusted to a height at which the balls of the feet rest against the upper crossboard. The inner edge of the soles are placed two cm from the edge of the scale. Keeping knees fully extended, arms evenly stretched, palms down, the participant bends and reaches forward (without jerking), pushing the sliding marker along the scale with the fingertips as far forward as possible. The position of maximum flexion must be held for approximately two seconds. Advise the participant that lowering the head will maximize the distance reached



If the knees flex, the trial is not counted. Do not attempt to hold the knees down. In addition, do not allow jerking, bouncing action.

The test is repeated twice. Record both readings and record the maximum reading to the nearest 0.5 cm.

4.5.4 Sit-Ups

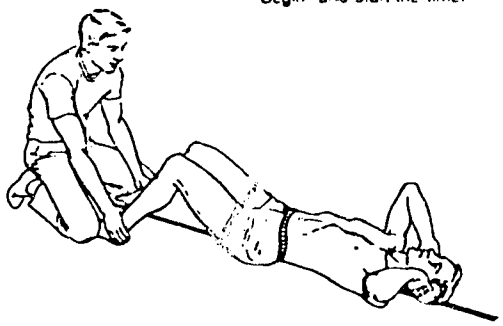
Equipment: Gym mat, [illegible] watch

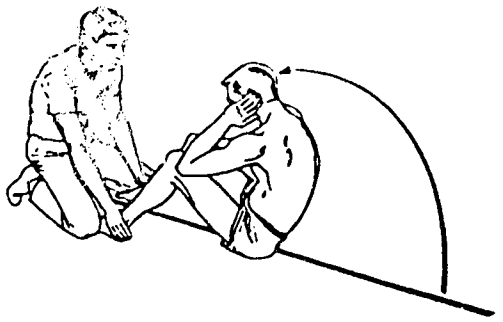
A PERSON WHO SUFFERS FROM LOWER BACK AILMENTS SHOULD NOT PER FORM THIS TEST

Procedure

The participant lies in a supine position knees bent at a right angle, and feet shoulder-width apart. The hands are placed at the side of the head with the fingers over the ears. The elbows are pointed towards the knees. The hands and elbows must be maintained in these positions for the entire duration of the test. Also, the ankles of the participant must be held throughout the test by the appraiser to ensure that the heels are in constant contact with the mat.

The participant is required to sit up (touch the knees with the elbows and return to the starting position (shoulders touch floor). THE PARTICIPANT PERFORMS AS MANY SIT-UPS AS POSSIBLE WITHIN ONE MINUTE. The participant may pause to rest whenever necessary.





[illegible] that the participant is instructed in the correct performance of the sit-up. The participant should be informed to initiate the sit-up by "curling the lower back followed by actively contracting the abdominal muscles and then continuing the movement with a well-controlled "curling up" of the trunk to the point where the elbows touch the knees. This is followed by a "curling down" of the trunk with particular emphasis on the lower back fully contacting the mat before the upper back and shoulders touch the mat.

A "rocking" or "bouncing" movement is not permitted. Also, the participant's buttocks must remain in contact with the mat and the fingers in contact with the side of the head at all times. Have the participant practice one or two repetitions to check for proper technique.

Advise the participant that incorrect repetitions, those not meeting the above criteria will not be counted. The participant should also be advised to avoid breath-holding by breathing rhythmically and to "exhale on effort", i.e., exhale during "curling up" phase of the sit-up.

When the participant is fully informed of the preceding details and is ready to start the sit-up test, give the command "Begin" and start the timer.

APPENDIX C-1

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
1.00	5.00	1.00	2.00	64.00	1.00	178.10	87.30	12.00	7.00	32.00
2.00	6.00	2.00	5.00	64.00	1.00	151.20	87.50	30.50	13.00	36.50
3.00	5.00	1.00	1.00	57.00	15.00	166.70	70.70	11.00	4.00	25.00
4.00	5.00	1.00	3.00	70.00	1.00	174.90	70.70	11.00	3.50	13.00
5.00	6.00	2.00	5.00	67.00	1.00	156.70	50.20	24.30	9.30	12.00
6.00	5.00	1.00	3.00	72.00	2.00	173.10	81.60	14.00	6.50	17.00
7.00	6.00	2.00	4.00	56.00	2.00	162.10	46.40	12.00	3.00	4.00
8.00	6.00	2.00	5.00	68.00	2.00	151.50	63.20	23.80	12.80	17.30
9.00	5.00	1.00	2.00	64.00	2.00	167.80	111.80	37.00	18.00	38.00
10.00	6.00	2.00	5.00	68.00	2.00	161.40	52.20	13.00	4.00	6.00
11.00	6.00	2.00	5.00	61.00	2.00	160.20	84.00	29.00	23.00	28.00
12.00	5.00	1.00	3.00	71.00	2.00	166.90	92.40	21.80	13.00	39.00
13.00	5.00	1.00	2.00	69.00	2.00	178.30	82.30	20.00	7.30	37.00
14.00	5.00	1.00	3.00	70.00	2.00	177.60	87.70	12.00	6.50	22.00
15.00	6.00	2.00	5.00	60.00	2.00	159.30	68.00	25.00	9.00	15.50
16.00	2.00	1.00	2.00	68.00	3.00	169.90	75.30	14.00	5.00	18.00
17.00	4.00	2.00	6.00	75.00	3.00	154.50	63.60	26.00	14.00	17.50
18.00	4.00	2.00	5.00	68.00	3.00	166.00	52.90	18.50	9.00	8.00
19.00	2.00	1.00	3.00	79.00	3.00	166.70	67.40	10.30	2.50	13.00
20.00	5.00	1.00	3.00	70.00	4.00	174.70	82.10	13.00	6.00	34.00
21.00	6.00	2.00	5.00	69.00	4.00	164.50	73.20	20.00	8.00	16.00
22.00	5.00	1.00	3.00	70.00	4.00	173.90	68.40	5.00	2.50	14.00
23.00	6.00	2.00	6.00	76.00	4.00	156.30	62.20	19.00	7.30	14.30
24.00	5.00	1.00	3.00	74.00	4.00	168.90	83.50	10.50	5.00	38.00
25.00	6.00	2.00	6.00	86.00	4.00	157.40	71.50	15.00	14.00	26.00
26.00	6.00	2.00	6.00	84.00	4.00	138.40	57.40	20.00	16.50	24.00
27.00	6.00	2.00	6.00	76.00	4.00	150.50	55.40	22.00	17.00	18.00
28.00	6.00	2.00	6.00	81.00	4.00	156.20	60.80	21.00	5.50	18.50
29.00	2.00	1.00	3.00	78.00	6.00	169.70	70.10	13.00	4.60	12.10
30.00	2.00	1.00	3.00	76.00	6.00	167.80	75.60	9.00	3.00	24.00
31.00	4.00	2.00	5.00	68.00	6.00	161.20	74.80	25.00	18.50	30.00
32.00	4.00	2.00	6.00	78.00	6.00	154.80	63.00	26.00	12.00	20.00
33.00	4.00	2.00	6.00	71.00	6.00	165.70	64.00	28.00	13.00	16.00
34.00	5.00	1.00	2.00	69.00	5.00	169.40	105.50	24.00	10.50	38.50
35.00	5.00	1.00	2.00	64.00	7.00	177.10	95.20	20.50	12.00	37.30
36.00	6.00	2.00	5.00	60.00	7.00	169.20	87.70	32.00	23.00	26.00
37.00	5.00	1.00	3.00	70.00	7.00	189.60	108.20	14.00	6.50	36.00
38.00	5.00	1.00	3.00	74.00	7.00	164.90	69.80	10.00	4.00	25.00
39.00	6.00	2.00	6.00	74.00	7.00	166.50	69.50	17.50	10.00	7.80
40.00	6.00	2.00	5.00	61.00	7.00	168.40	71.20	30.00	15.50	15.80
41.00	5.00	1.00	3.00	70.00	7.00	177.80	75.20	7.50	4.00	14.00
42.00	2.00	1.00	3.00	73.00	8.00	173.10	67.00	3.50	2.00	7.00
43.00	4.00	2.00	6.00	71.00	8.00	149.10	81.00	30.00	16.30	31.00
44.00	4.00	2.00	4.00	57.00	8.00	157.20	70.10	28.00	16.50	27.50
45.00	4.00	2.00	5.00	61.00	9.00	161.50	73.50	31.00	22.00	30.50
46.00	4.00	2.00	5.00	64.00	9.00	166.40	71.00	31.30	18.00	19.50
47.00	4.00	2.00	5.00	68.00	9.00	163.80	62.30	26.80	7.00	15.30
48.00	2.00	1.00	3.00	74.00	9.00	170.90	79.20	10.00	5.00	15.00
49.00	2.00	1.00	3.00	75.00	9.00	177.00	75.00	9.00	3.50	12.00
50.00	4.00	2.00	5.00	62.00	9.00	159.00	58.80	21.00	9.00	12.00
51.00	2.00	1.00	3.00	82.00	9.00	169.90	78.80	10.00	5.80	19.00

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
52.00	2.00	1.00	2.00	65.00	9.00	171.40	90.90	15.00	9.00	31.30
53.00	2.00	1.00	2.00	65.00	9.00	186.10	94.10	10.00	5.00	28.30
54.00	2.00	1.00	2.00	69.00	9.00	162.80	60.00	10.00	5.00	9.50
55.00	2.00	1.00	3.00	71.00	9.00	166.60	65.00	8.00	4.00	9.00
56.00	2.00	1.00	3.00	80.00	9.00	164.30	73.00	18.00	6.50	30.50
57.00	2.00	1.00	3.00	74.00	9.00	177.70	82.60	12.00	5.00	18.00
58.00	2.00	1.00	3.00	71.00	9.00	173.10	78.20	8.70	4.00	18.50
59.00	5.00	1.00	2.00	60.00	10.00	176.70	90.20	12.00	8.00	27.00
60.00	5.00	1.00	2.00	67.00	10.00	176.20	89.00	10.00	2.50	23.00
61.00	6.00	2.00	5.00	65.00	10.00	163.10	56.40	16.00	11.00	12.00
62.00	5.00	1.00	1.00	56.00	10.00	166.80	88.40	11.30	7.80	30.80
63.00	5.00	1.00	1.00	57.00	1.00	173.10	88.40	12.00	7.00	16.00
64.00	6.00	2.00	4.00	56.00	10.00	161.00	49.50	13.00	11.50	7.00
65.00	6.00	2.00	6.00	71.00	10.00	163.40	63.10	18.00	8.00	19.00
66.00	5.00	1.00	1.00	58.00	10.00	157.20	61.10	5.50	2.50	11.80
67.00	6.00	2.00	5.00	64.00	10.00	162.80	62.80	26.00	21.00	34.00
68.00	5.00	1.00	2.00	66.00	10.00	166.20	80.20	13.00	5.00	23.50
69.00	6.00	2.00	5.00	64.00	10.00	163.90	58.10	15.50	9.00	12.00
70.00	5.00	1.00	2.00	60.00	10.00	168.80	72.90	8.00	3.00	10.80
71.00	5.00	1.00	3.00	85.00	10.00	156.80	71.40	21.00	7.00	14.00
72.00	6.00	2.00	5.00	68.00	10.00	170.00	69.60	20.50	6.30	19.50
73.00	6.00	2.00	5.00	61.00	10.00	163.40	73.20	23.00	19.00	27.00
74.00	3.00	2.00	4.00	58.00	11.00	152.40	50.30	22.80	10.30	15.00
75.00	3.00	2.00	4.00	52.00	11.00	161.50	75.20	30.30	19.00	10.30
76.00	3.00	2.00	4.00	56.00	11.00	167.60	68.00	31.30	12.30	18.50
77.00	3.00	2.00	6.00	70.00	11.00	166.70	63.40	13.00	6.50	11.00
78.00	5.00	1.00	2.00	62.00	12.00	176.00	86.00	11.50	4.50	14.50
79.00	5.00	1.00	2.00	63.00	12.00	171.70	78.70	8.00	4.00	18.00
80.00	6.00	2.00	5.00	66.00	12.00	152.60	65.50	19.50	13.50	14.50
81.00	6.00	2.00	6.00	72.00	12.00	160.00	76.00	20.00	18.00	25.00
82.00	6.00	2.00	6.00	82.00	12.00	161.20	55.80	29.50	11.00	12.50
83.00	5.00	1.00	3.00	81.00	12.00	170.90	82.90	11.00	6.00	11.00
84.00	5.00	1.00	3.00	72.00	12.00	172.50	71.60	12.00	5.00	14.00
85.00	6.00	2.00	4.00	59.00	12.00	157.00	59.30	23.50	8.00	18.00
86.00	5.00	1.00	2.00	63.00	12.00	168.10	76.10	8.50	4.00	18.00
87.00	5.00	1.00	3.00	73.00	12.00	176.90	69.00	6.80	3.50	13.00
88.00	5.00	1.00	2.00	69.00	12.00	180.40	80.00	5.00	3.00	11.00
89.00	6.00	2.00	5.00	64.00	12.00	170.00	74.30	17.00	17.50	19.00
90.00	6.00	2.00	5.00	63.00	12.00	163.20	76.00	35.80	25.00	19.00
91.00	5.00	1.00	3.00	72.00	12.00	183.90	79.50	9.00	3.00	7.00
92.00	5.00	1.00	2.00	69.00	12.00	172.20	74.50	10.00	4.50	16.00
93.00	6.00	2.00	5.00	68.00	12.00	171.50	63.20	22.00	8.00	8.00
94.00	6.00	2.00	5.00	61.00	12.00	151.20	83.60	36.00	26.50	37.00
95.00	6.00	2.00	5.00	65.00	12.00	162.30	58.40	22.00	16.00	17.00
96.00	6.00	2.00	5.00	65.00	12.00	161.00	59.20	24.00	12.50	10.00
97.00	5.00	1.00	3.00	81.00	13.00	172.50	78.00	10.80	4.80	19.60
98.00	6.00	2.00	5.00	60.00	13.00	161.10	96.30	31.00	27.30	30.30
99.00	5.00	1.00	2.00	65.00	13.00	175.90	100.50	12.00	7.30	36.50
100.00	5.00	1.00	2.00	69.00	13.00	166.90	84.50	9.50	4.50	18.50
101.00	5.00	1.00	3.00	70.00	13.00	168.30	83.30	8.00	5.00	28.00
102.00	5.00	1.00	3.00	77.00	13.00	169.90	69.30	8.80	4.00	15.00

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
103.00	6.00	2.00	5.00	64.00	13.00	163.40	81.60	39.00	24.50	30.00
104.00	5.00	1.00	2.00	69.00	13.00	167.50	70.80	11.00	5.00	18.00
105.00	5.00	1.00	3.00	74.00	13.00	166.50	94.80	17.50	9.00	35.50
106.00	6.00	2.00	5.00	62.00	13.00	162.30	85.00	30.00	19.00	22.00
107.00	5.00	1.00	2.00	68.00	13.00	180.90	62.80	3.00	2.00	6.00
108.00	5.00	1.00	2.00	62.00	13.00	168.50	83.40	6.00	3.00	27.00
109.00	5.00	1.00	3.00	75.00	13.00	183.00	97.20	15.80	8.00	24.00
110.00	6.00	2.00	5.00	61.00	13.00	165.70	66.80	17.00	8.00	20.00
111.00	6.00	2.00	6.00	73.00	14.00	160.00	78.70	23.30	19.00	27.50
112.00	5.00	1.00	2.00	67.00	14.00	179.40	86.90	9.00	5.70	25.00
113.00	6.00	2.00	5.00	62.00	14.00	161.50	85.20	28.00	22.00	28.00
114.00	5.00	1.00	2.00	67.00	14.00	171.60	66.40	9.30	3.00	18.00
115.00	6.00	2.00	5.00	69.00	14.00	156.40	59.90	20.00	9.00	16.00
116.00	4.00	2.00	6.00	71.00	15.00	156.40	58.90	19.80	13.70	23.10
117.00	4.00	2.00	5.00	60.00	15.00	165.30	65.00	25.00	8.00	14.00
118.00	4.00	2.00	5.00	68.00	15.00	162.80	55.40	19.00	9.00	10.00
119.00	2.00	1.00	1.00	57.00	15.00	176.40	93.00	13.00	7.80	34.00
120.00	4.00	2.00	5.00	66.00	15.00	161.60	84.70	27.00	19.00	30.50
121.00	4.00	2.00	5.00	66.00	15.00	161.80	63.10	25.00	15.50	15.00
122.00	2.00	1.00	2.00	61.00	15.00	176.50	88.80	5.00	3.80	17.00
123.00	2.00	1.00	2.00	64.00	15.00	174.00	77.10	17.50	7.00	22.80
124.00	2.00	1.00	2.00	68.00	16.00	172.80	96.00	12.00	11.00	21.00
125.00	4.00	2.00	5.00	66.00	16.00	161.90	94.40	31.00	18.50	23.00
126.00	4.00	2.00	5.00	64.00	16.00	162.70	84.50	31.00	23.50	20.00
127.00	2.00	1.00	3.00	74.00	116.00	182.10	83.90	8.30	3.50	23.00
128.00	2.00	1.00	2.00	65.00	16.00	175.20	89.50	14.00	13.00	27.00
129.00	1.00	1.00	2.00	64.00	17.00	174.60	74.60	11.00	5.50	14.00
130.00	1.00	1.00	3.00	70.00	17.00	165.90	77.60	7.80	3.00	24.50
131.00	1.00	1.00	2.00	65.00	17.00	159.50	81.90	14.00	9.00	30.00
132.00	1.00	1.00	2.00	64.00	17.00	169.90	76.40	9.00	4.50	14.00
133.00	6.00	2.00	4.00	59.00	17.00	162.80	60.20	18.50	9.00	9.00
134.00	5.00	1.00	2.00	60.00	17.00	174.20	73.30	9.00	3.50	15.50
135.00	5.00	1.00	2.00	63.00	17.00	178.70	84.60	6.00	3.00	24.50
136.00	5.00	1.00	2.00	61.00	17.00	175.40	75.50	4.10	4.10	9.00
137.00	5.00	1.00	1.00	59.00	17.00	175.20	80.50	10.00	3.50	9.00
138.00	1.00	1.00	2.00	62.00	17.00	167.40	76.90	10.00	2.50	22.30
139.00	1.00	1.00	2.00	65.00	17.00	183.90	80.70	7.50	3.00	17.50
140.00	1.00	1.00	2.00	65.00	17.00	179.90	92.70	15.00	8.50	24.00
141.00	1.00	1.00	1.00	57.00	17.00	176.90	77.50	6.00	4.00	21.00
142.00	1.00	1.00	2.00	63.00	17.00	171.70	85.70	8.00	4.00	18.00
143.00	1.00	1.00	2.00	62.00	17.00	172.20	75.60	16.10	5.20	18.30
144.00	1.00	1.00	2.00	64.00	17.00	176.70	100.70	15.00	8.30	52.00
145.00	1.00	1.00	1.00	55.00	17.00	186.60	90.40	3.50	3.00	7.00
146.00	5.00	1.00	1.00	56.00	10.00	176.60	75.50	8.50	3.50	15.00
147.00	5.00	1.00	2.00	66.00	17.00	176.10	70.30	6.50	3.00	12.50
148.00	1.00	1.00	2.00	62.00	17.00	180.30	78.90	11.00	4.00	15.30
149.00	1.00	1.00	2.00	64.00	17.00	173.90	89.70	14.00	7.00	30.00
150.00	1.00	1.00	1.00	59.00	17.00	181.80	91.50	10.00	7.00	28.00
151.00	1.00	1.00	2.00	61.00	17.00	173.10	78.90	10.00	5.00	20.00
152.00	5.00	1.00	1.00	57.00	17.00	175.20	87.30	10.50	3.50	29.50
153.00	5.00	1.00	2.00	69.00	17.00	173.60	73.40	6.00	2.50	11.00

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
154.00	5.00	1.00	2.00	66.00	17.00	175.50	77.70	4.00	3.00	13.20
155.00	5.00	1.00	3.00	70.00	17.00	169.30	63.10	4.00	2.00	10.00
156.00	4.00	2.00	5.00	67.00	18.00	163.80	61.20	16.00	11.50	10.00
157.00	2.00	1.00	3.00	72.00	18.00	171.30	88.10	12.50	5.00	21.00
158.00	2.00	1.00	2.00	61.00	18.00	178.60	79.10	5.00	3.00	21.00
159.00	2.00	1.00	3.00	70.00	18.00	176.10	76.70	10.00	3.50	21.50
160.00	4.00	2.00	6.00	76.00	18.00	158.90	58.80	22.80	8.50	9.30
161.00	2.00	1.00	2.00	68.00	18.00	171.00	74.00	9.00	4.00	21.00
162.00	3.00	2.00	5.00	63.00	19.00	159.30	60.80	18.00	8.00	11.00
163.00	3.00	2.00	4.00	55.00	19.00	155.80	58.20	20.30	11.50	14.00
164.00	3.00	2.00	5.00	65.00	19.00	166.20	56.10	18.00	6.00	7.00
165.00	1.00	1.00	1.00	56.00	19.00	180.60	72.70	8.00	3.00	13.30
166.00	1.00	1.00	3.00	73.00	19.00	181.20	101.10	12.00	6.50	35.00
167.00	1.00	1.00	2.00	67.00	19.00	185.40	85.00	9.00	5.00	26.00
168.00	3.00	2.00	5.00	68.00	19.00	168.20	63.80	12.00	6.00	12.00
169.00	3.00	2.00	6.00	70.00	19.00	157.50	61.40	18.00	8.00	12.00
170.00	3.00	2.00	5.00	67.00	20.00	157.80	56.40	22.00	6.00	12.00
171.00	5.00	1.00	2.00	66.00	20.00	165.00	64.30	6.10	3.00	7.00
172.00	3.00	2.00	6.00	70.00	20.00	151.10	43.40	23.00	3.00	7.00
173.00	3.00	2.00	4.00	57.00	20.00	158.70	61.90	23.30	11.80	18.30
174.00	1.00	1.00	1.00	58.00	21.00	166.40	63.40	5.00	2.50	10.00
175.00	1.00	1.00	1.00	57.00	21.00	167.60	72.80	5.00	3.50	15.00
176.00	3.00	2.00	4.00	55.00	21.00	158.30	61.20	33.80	18.30	22.80
177.00	1.00	1.00	3.00	70.00	21.00	163.30	58.60	4.00	2.50	8.00
178.00	1.00	1.00	3.00	79.00	21.00	179.70	88.30	14.00	4.00	21.00
179.00	3.00	2.00	5.00	68.00	21.00	161.00	56.40	11.00	7.00	16.00
180.00	3.00	2.00	5.00	60.00	21.00	162.80	73.40	34.00	19.00	24.30
181.00	3.00	2.00	6.00	71.00	21.00	157.60	52.50	23.80	11.30	9.00
182.00	1.00	1.00	3.00	72.00	21.00	170.50	60.80	9.50	4.50	7.50
183.00	3.00	2.00	5.00	65.00	21.00	158.40	70.60	16.00	17.50	15.00
184.00	3.00	2.00	5.00	66.00	21.00	159.40	63.50	23.50	7.80	11.00
185.00	1.00	1.00	2.00	64.00	21.00	179.20	88.60	10.00	7.00	32.00
186.00	3.00	2.00	4.00	58.00	21.00	159.20	68.40	24.00	14.00	18.50
187.00	3.00	2.00	5.00	69.00	21.00	160.60	61.40	23.30	8.30	12.00
188.00	5.00	1.00	1.00	58.00	22.00	181.20	73.60	7.30	3.00	8.00
189.00	5.00	1.00	1.00	58.00	22.00	175.00	81.80	12.00	4.50	33.00

C1	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21
1.00	22.00	29.00	9.00	12.50	85.50	36.50	7.60	5.80	31.50	9.90
2.00	30.50	47.50	54.00	28.50	139.00	35.70	6.30	5.30	34.50	9.60
3.00	25.00	31.00	11.00	6.00	71.00	39.80	6.20	5.50	28.60	9.10
4.00	14.00	22.00	12.30	10.50	52.00	38.80	7.40	6.10	30.90	9.70
5.00	14.50	19.00	33.00	17.00	77.10	35.40	6.30	5.40	27.50	9.20
6.00	27.00	23.50	15.80	6.50	71.00	38.90	7.40	5.90	30.90	9.40
7.00	3.00	4.00	15.00	9.00	31.00	34.10	6.60	5.10	28.00	8.90
8.00	14.00	35.00	33.00	30.50	98.40	35.80	6.80	5.00	30.70	9.90
9.00	37.50	40.00	42.50	35.00	165.50	40.60	8.00	5.90	31.60	11.30
10.00	9.00	12.50	20.50	14.00	46.00	33.40	6.30	5.60	31.40	8.90
11.00	23.00	35.50	49.50	38.50	141.50	38.10	6.80	5.10	32.50	9.80
12.00	31.00	23.00	11.40	22.00	126.80	38.30	7.50	5.70	33.40	10.00
13.00	34.00	34.00	7.00	6.50	104.80	38.50	7.30	5.90	31.70	9.70
14.00	20.00	26.00	8.00	5.50	66.00	40.20	7.50	6.10	33.50	10.30
15.00	16.00	25.50	39.50	30.50	96.00	38.40	6.60	5.40	31.70	9.80
16.00	18.80	23.60	9.00	14.00	68.00	38.40	6.60	6.00	32.80	9.50
17.00	22.00	31.00	43.00	33.00	112.50	35.80	6.50	5.10	27.80	9.40
18.00	10.30	18.30	23.00	13.80	59.60	34.30	6.30	5.40	29.80	9.60
19.00	11.00	12.00	10.30	10.00	46.80	40.00	7.20	5.80	31.70	9.30
20.00	29.50	31.00	10.50	5.00	87.50	40.50	8.10	6.70	32.60	10.00
21.00	17.00	32.00	28.00	25.00	86.00	36.10	6.60	5.20	31.40	9.50
22.00	21.00	34.00	6.50	3.00	45.50	39.00	6.90	5.80	29.70	9.20
23.00	13.00	22.30	18.50	25.00	81.60	35.30	6.90	5.30	31.70	9.70
24.00	25.00	29.00	12.00	8.00	86.50	42.10	6.60	5.60	29.10	8.80
25.00	19.00	29.00	40.00	23.00	102.00	36.60	6.20	5.40	33.60	10.00
26.00	36.00	44.50	45.50	25.50	131.50	33.80	7.30	5.10	32.80	9.40
27.00	17.00	24.50	32.00	24.50	94.00	32.10	6.20	5.10	30.20	9.10
28.00	16.50	18.30	23.80	16.00	75.50	35.00	6.40	5.40	31.50	8.90
29.00	10.00	21.00	20.50	8.00	47.70	36.80	7.70	6.10	29.90	9.80
30.00	20.00	24.00	9.00	5.00	61.00	38.70	7.10	6.10	29.50	9.90
31.00	28.00	32.00	43.50	23.50	125.00	35.90	6.20	5.30	30.50	9.10
32.00	16.00	31.80	36.00	26.50	100.50	35.20	6.30	4.90	30.20	9.30
33.00	16.50	36.50	42.50	28.00	101.50	35.00	6.00	4.80	30.40	8.90
34.00	28.00	33.00	23.00	17.00	118.00	43.70	7.80	6.90	33.30	10.90
35.00	35.00	30.00	17.80	20.00	124.80	39.00	7.70	6.10	30.70	11.00
36.00	28.00	41.00	48.00	33.00	142.00	38.30	6.40	5.40	34.70	9.90
37.00	32.00	29.00	14.00	11.00	99.50	40.00	8.20	6.30	33.30	11.10
38.00	28.00	23.00	8.00	9.00	76.50	38.90	7.00	5.80	27.10	8.80
39.00	14.30	28.50	36.00	35.30	90.70	37.10	6.90	5.90	33.70	9.80
40.00	16.30	31.50	37.30	28.50	106.10	35.50	7.10	5.20	32.80	10.10
41.00	18.00	26.00	6.00	6.00	49.50	36.00	7.30	6.00	30.10	9.80
42.00	6.50	5.00	4.00	4.00	23.00	34.70	7.90	6.60	29.40	10.10
43.00	22.30	32.50	54.50	41.00	140.60	35.70	7.60	5.20	33.20	9.30
44.00	21.00	33.00	37.50	27.30	120.30	34.50	6.80	5.20	31.00	9.70
45.00	25.00	27.00	46.00	23.00	131.50	34.90	6.80	5.40	31.20	9.40
46.00	16.80	28.50	30.00	30.00	115.60	38.20	7.20	5.30	32.20	10.00
47.00	15.00	20.00	37.30	27.00	91.10	38.60	6.70	5.20	31.20	10.10
48.00	15.00	16.00	10.00	5.50	50.50	38.30	7.60	5.70	30.50	9.40
49.00	6.50	18.00	11.00	5.00	36.00	38.90	8.50	7.40	32.50	10.10
50.00	13.00	26.00	36.00	28.00	83.00	35.00	6.30	5.20	29.00	9.30
51.00	28.00	23.60	13.00	13.00	75.80	37.70	7.30	6.00	29.60	9.90

C1	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21
52.00	25.80	23.60	10.00	13.00	94.10	39.10	7.20	5.80	29.10	9.70
53.00	23.50	21.00	11.00	8.00	74.80	41.80	7.80	6.30	32.00	10.20
54.00	9.50	24.50	14.50	11.00	45.00	35.30	7.10	5.70	29.60	9.40
55.00	14.50	17.00	6.40	8.50	44.00	38.50	6.80	5.80	28.90	8.80
56.00	25.00	23.00	11.00	10.00	90.00	37.70	6.70	6.20	30.20	9.20
57.00	23.00	20.00	14.00	14.00	72.00	40.90	7.70	6.10	31.70	10.40
58.00	26.00	25.00	11.00	5.00	62.20	41.80	7.90	6.70	31.90	9.90
59.00	40.00	38.00	12.00	6.50	93.50	39.60	6.50	6.00	29.70	9.70
60.00	17.00	26.50	8.50	5.00	57.50	39.60	7.60	6.10	29.90	10.60
61.00	17.00	19.00	29.00	18.00	74.00	35.30	6.40	5.30	29.10	9.70
62.00	20.00	30.80	9.00	7.50	77.40	37.10	7.10	6.70	31.70	10.80
63.00	27.00	22.00	27.50	16.50	78.50	41.30	6.50	6.00	28.80	9.10
64.00	8.00	15.50	19.00	15.00	54.50	34.10	6.20	5.40	28.60	8.90
65.00	9.00	27.50	21.50	18.50	72.50	36.90	6.90	5.50	30.30	9.10
66.00	13.00	21.00	5.00	3.00	35.80	38.50	6.60	5.60	26.80	8.80
67.00	26.00	34.50	31.00	26.00	133.00	35.20	5.70	5.20	29.20	9.40
68.00	27.00	30.00	11.80	9.00	53.70	38.00	6.60	6.20	30.00	10.00
69.00	10.50	19.00	17.50	13.00	60.00	36.00	6.80	5.50	31.30	9.30
70.00	17.00	18.00	10.50	5.00	43.80	38.50	7.80	6.10	28.40	9.90
71.00	16.50	39.00	30.00	19.00	77.50	36.00	7.30	6.30	32.80	10.20
72.00	19.50	24.00	24.80	19.30	85.10	35.90	6.80	5.30	30.80	9.80
73.00	23.50	28.50	30.00	21.50	114.00	35.50	6.00	5.40	31.50	8.70
74.00	7.00	10.00	29.30	18.30	73.40	33.80	6.30	5.20	29.10	9.20
75.00	21.00	31.30	38.50	28.30	108.90	38.40	6.90	5.50	32.80	9.90
76.00	21.00	32.50	39.00	19.00	102.10	38.40	6.00	5.20	30.00	9.70
77.00	6.80	15.00	21.80	10.80	48.10	38.10	6.50	5.50	31.70	9.90
78.00	20.00	34.00	15.00	15.50	66.00	42.40	7.20	6.40	31.10	10.30
79.00	29.00	31.00	9.00	6.50	65.50	38.60	7.80	6.10	30.60	10.10
80.00	17.00	24.50	34.00	24.50	89.00	34.00	6.30	5.30	31.90	9.50
81.00	24.50	33.00	41.50	30.00	117.50	35.30	6.30	5.40	33.10	9.90
82.00	18.50	26.50	28.50	23.50	86.50	34.40	6.60	5.50	30.40	9.20
83.00	16.00	21.00	7.00	4.00	48.00	39.50	7.40	6.50	31.20	10.20
84.00	27.00	26.50	18.00	8.00	66.00	38.40	7.70	6.30	30.50	10.10
85.00	15.00	29.50	28.00	17.50	82.00	34.30	6.20	5.40	29.30	8.50
86.00	16.00	17.00	14.00	5.50	52.00	38.50	7.30	5.90	31.50	9.60
87.00	13.00	23.00	6.50	4.00	40.30	39.60	7.40	5.80	32.30	9.90
88.00	9.00	10.00	7.00	4.00	32.00	40.40	6.90	5.60	30.60	9.20
89.00	27.00	24.00	41.00	27.50	108.00	34.40	6.20	5.40	31.40	9.00
90.00	27.80	32.00	42.50	42.00	149.60	37.60	7.30	5.60	32.50	10.50
91.00	9.00	19.00	11.00	5.50	33.50	41.10	7.80	6.40	32.00	10.10
92.00	13.30	21.00	11.00	3.50	47.30	48.70	8.10	6.40	29.90	9.90
93.00	12.00	27.50	28.00	21.00	71.00	37.20	6.80	5.70	31.20	9.20
94.00	43.50	54.50	47.50	39.00	182.00	38.40	6.80	5.80	31.20	10.20
95.00	23.00	22.00	33.00	23.00	101.00	34.80	6.90	5.50	29.10	8.60
96.00	11.00	33.50	39.00	21.00	78.50	33.80	6.60	5.40	28.90	9.30
97.00	20.10	23.00	11.40	8.20	63.60	38.80	7.40	6.10	30.90	9.70
98.00	24.00	41.00	55.50	41.00	153.00	39.30	8.10	5.80	36.40	11.30
99.00	30.00	35.00	12.00	14.30	100.10	39.90	7.10	5.90	33.40	9.70
100.00	20.00	22.00	17.00	10.00	62.50	40.00	6.60	6.20	28.20	9.60
101.00	15.50	23.00	12.00	6.00	62.50	41.30	6.90	6.00	31.20	9.00
102.00	20.00	23.00	10.00	6.50	54.30	36.90	7.10	5.60	29.80	9.00

C1	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21
103.00	23.00	36.00	49.00	38.50	155.00	36.40	8.10	5.60	34.90	11.10
104.00	16.00	16.00	10.50	5.50	55.50	38.10	6.50	5.80	28.20	8.80
105.00	23.00	23.00	11.00	7.50	92.50	38.10	7.50	6.00	33.50	9.50
106.00	23.00	25.00	43.00	40.00	134.00	35.80	6.90	5.10	32.60	11.10
107.00	5.00	6.00	5.00	2.50	18.50	36.80	7.10	5.50	30.40	9.90
108.00	27.00	21.00	12.50	7.00	70.00	38.30	6.60	5.60	33.10	9.30
109.00	27.00	23.00	30.00	21.00	95.80	36.60	7.20	6.30	32.40	10.10
110.00	18.00	26.00	21.00	15.00	78.00	36.90	7.20	5.70	33.30	9.80
111.00	24.80	36.00	31.50	25.00	119.30	36.80	7.10	5.70	31.70	9.90
112.00	25.00	26.00	13.00	12.00	76.70	42.00	7.00	6.10	31.90	9.40
113.00	32.00	34.00	46.50	31.00	141.00	35.60	6.60	5.00	34.40	9.80
114.00	15.00	27.00	12.00	5.00	50.30	35.80	6.80	5.80	28.50	9.90
115.00	24.00	44.00	24.50	20.00	89.00	34.80	6.40	5.10	31.70	9.20
116.00	24.00	32.80	24.70	21.10	101.70	35.40	6.50	5.40	29.40	8.90
117.00	18.00	4.00	38.00	24.50	89.50	35.50	6.50	5.20	28.50	9.00
118.00	6.00	19.00	22.00	9.00	53.00	36.30	6.60	5.50	28.60	8.90
119.00	22.50	32.00	14.00	6.50	83.80	40.60	6.90	5.20	29.50	9.70
120.00	29.00	31.50	47.00	33.00	138.50	34.70	6.80	5.30	33.80	10.60
121.00	22.00	33.50	34.30	22.00	99.50	35.40	6.00	5.20	28.40	8.80
122.00	30.00	32.00	6.00	6.00	61.80	38.70	7.40	6.40	31.40	9.50
123.00	26.00	22.00	35.00	21.00	94.30	39.70	7.50	6.00	29.80	10.20
124.00	21.00	30.00	7.00	10.00	75.00	38.00	7.60	6.10	31.90	9.50
125.00	22.50	35.00	48.00	41.50	136.50	39.70	7.70	5.90	36.30	11.30
126.00	24.00	46.00	50.00	38.00	136.50	36.70	7.10	5.70	32.70	11.10
127.00	23.00	23.60	9.00	6.00	63.80	42.60	7.40	6.40	30.90	9.90
128.00	23.50	23.60	21.00	19.00	96.50	40.20	7.00	5.80	29.60	10.20
129.00	21.50	27.00	11.00	9.00	61.00	37.20	7.10	6.10	28.00	9.40
130.00	26.00	26.00	8.00	5.00	62.30	36.00	7.30	6.30	28.30	9.10
131.00	34.50	37.00	5.00	9.00	96.50	38.10	6.60	5.90	30.00	9.50
132.00	14.50	21.00	10.00	6.50	48.50	34.50	6.80	6.70	32.40	9.60
133.00	13.00	36.00	32.50	18.00	67.50	38.70	6.50	5.40	29.90	8.70
134.00	24.00	26.00	8.00	4.00	56.00	40.50	7.60	6.10	30.20	9.60
135.00	11.00	23.00	5.50	3.00	47.50	41.20	7.40	5.90	31.00	10.10
136.00	6.20	18.10	8.20	4.20	27.60	40.10	7.00	6.10	28.30	9.70
137.00	17.00	19.00	13.00	5.00	44.50	39.40	7.70	6.40	32.20	9.90
138.00	29.00	40.00	13.50	6.50	70.30	37.30	6.60	5.30	28.20	8.80
139.00	26.00	30.00	9.00	5.00	59.00	41.90	7.50	6.00	27.80	9.20
140.00	20.00	24.00	12.00	8.00	75.50	43.00	8.70	6.50	33.00	10.60
141.00	13.00	25.00	10.50	4.00	48.00	44.10	7.00	6.40	31.60	9.10
142.00	19.00	25.00	7.00	7.00	56.00	40.50	7.30	6.10	29.50	10.30
143.00	16.80	33.30	15.20	7.30	63.70	37.40	7.10	6.10	29.10	9.60
144.00	37.00	41.00	12.00	11.00	123.30	38.30	7.10	6.10	30.20	9.80
145.00	6.00	12.50	6.00	4.00	23.50	44.40	7.70	6.90	31.30	10.60
146.00	11.00	22.80	12.00	7.00	45.00	37.10	6.90	5.90	28.40	9.00
147.00	13.00	20.00	10.00	4.00	39.00	37.50	7.50	5.80	27.90	8.70
148.00	15.30	19.00	7.00	5.50	51.10	38.20	7.80	6.10	31.90	10.60
149.00	21.00	23.50	13.00	10.00	82.00	41.40	7.10	6.40	30.00	10.60
150.00	32.00	30.80	12.00	6.00	83.00	39.60	7.20	5.80	30.20	9.30
151.00	30.00	26.00	12.00	10.00	75.00	36.60	6.80	5.80	29.30	9.90
152.00	26.00	35.00	14.00	5.00	74.50	41.20	7.30	6.20	29.80	9.90
153.00	6.00	8.00	5.00	5.00	30.50	35.00	7.80	5.90	30.50	10.20

C1	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21
154.00	10.50	18.00	5.00	3.00	33.70	39.70	7.50	6.20	29.70	9.80
155.00	6.00	9.00	4.50	2.00	24.00	38.80	7.00	5.90	29.00	9.10
156.00	16.00	26.00	29.00	17.00	70.50	37.50	6.60	5.80	32.10	9.60
157.00	26.00	32.80	7.80	7.80	72.30	39.40	6.90	5.80	32.00	9.40
158.00	14.00	28.00	11.00	6.00	49.00	37.20	7.80	5.40	30.30	9.50
159.00	27.00	25.00	11.50	3.50	65.50	38.50	7.60	5.70	29.90	9.40
160.00	12.30	23.00	29.00	22.80	75.70	35.30	6.30	5.50	31.20	9.20
161.00	16.00	22.00	15.00	10.00	60.00	40.00	6.60	6.40	30.00	9.10
162.00	11.80	21.50	28.00	17.50	66.30	36.80	6.50	5.30	30.70	9.20
163.00	21.80	29.00	32.00	18.50	86.10	36.60	6.50	5.30	28.00	9.70
164.00	13.00	15.00	32.00	21.00	65.00	35.20	6.80	5.20	27.50	8.90
165.00	8.50	10.00	12.00	5.00	37.80	38.70	7.80	6.10	28.50	9.90
166.00	35.00	32.00	9.00	10.00	98.50	38.50	7.60	6.10	33.00	9.90
167.00	22.00	27.00	12.00	8.50	70.50	41.20	7.20	6.00	32.50	10.10
168.00	10.00	20.00	19.00	10.00	50.00	34.30	6.30	5.30	29.20	9.10
169.00	8.50	16.00	29.80	26.00	72.50	35.60	6.80	5.10	31.20	9.00
170.00	16.00	18.50	31.50	19.50	75.50	36.30	6.20	4.80	26.60	8.80
171.00	4.30	12.50	7.00	6.60	27.00	37.90	7.50	5.90	28.30	9.20
172.00	6.00	7.00	25.00	13.00	52.00	33.20	5.90	5.20	26.50	8.50
173.00	23.00	23.00	27.30	25.00	101.40	34.60	6.80	5.50	30.50	10.60
174.00	14.00	11.00	10.00	5.00	36.50	35.30	7.10	5.50	26.50	9.30
175.00	24.00	22.00	5.50	2.50	50.80	39.70	6.60	5.50	27.80	9.50
176.00	12.00	21.80	32.00	28.00	114.90	34.70	6.40	4.90	29.60	9.40
177.00	3.00	8.00	3.00	3.00	20.50	38.50	6.60	5.70	28.30	9.50
178.00	28.00	25.00	13.00	17.00	84.00	39.30	7.20	6.20	31.10	10.10
179.00	10.00	18.00	10.00	8.00	52.00	36.10	6.10	5.40	28.80	8.90
180.00	23.30	29.30	52.30	29.00	129.60	37.20	7.00	5.10	31.80	9.80
181.00	11.00	14.50	34.00	18.50	73.60	34.10	6.50	5.10	30.40	9.80
182.00	13.00	24.30	19.00	11.00	45.50	38.50	7.50	6.00	28.50	9.60
183.00	13.00	18.00	39.00	24.00	85.50	33.30	6.20	4.90	31.50	8.90
184.00	14.00	13.30	38.30	28.00	84.30	34.70	7.20	5.30	29.40	9.90
185.00	27.00	27.00	8.00	7.00	83.00	39.90	7.20	5.60	31.50	9.10
186.00	18.30	33.00	39.00	29.50	104.30	35.70	6.50	5.30	31.70	9.70
187.00	15.00	21.80	27.80	16.30	74.90	35.50	6.50	5.60	30.60	9.60
188.00	8.00	14.00	12.00	7.50	33.80	38.50	7.10	6.50	29.50	9.60
189.00	33.00	38.80	8.00	5.50	88.00	38.00	7.00	5.80	29.40	8.60

C1	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31
1.00	107.80	103.00	104.30	36.00	32.00	28.70	18.00	54.00	37.10	8.00
2.00	105.30	128.90	113.00	31.10	31.10	24.10	15.80	52.10	35.50	21.00
3.00	99.30	92.80	92.50	32.40	31.10	28.00	16.50	53.00	34.60	36.00
4.00	101.50	97.70	95.40	32.00	30.70	27.40	18.30	52.90	35.70	53.00
5.00	79.10	77.50	68.10	26.60	26.60	23.30	15.60	49.00	33.10	24.00
6.00	106.00	102.30	104.80	31.70	31.70	27.70	17.60	56.30	36.40	45.50
7.00	74.60	67.70	58.90	23.60	23.10	21.30	14.90	41.70	29.70	33.00
8.00	90.00	101.50	90.50	30.10	30.00	23.70	14.70	51.10	34.70	21.00
9.00	119.00	124.00	120.00	40.20	38.70	31.50	18.70	55.80	46.00	46.50
10.00	84.60	85.40	67.80	25.20	24.30	23.20	15.40	41.50	31.80	30.00
11.00	100.90	100.40	91.40	29.60	29.40	25.00	15.90	58.50	38.70	33.00
12.00	110.00	97.70	95.40	32.00	35.60	29.50	19.10	59.30	37.10	35.00
13.00	105.40	101.60	100.80	32.20	31.20	27.70	17.80	51.50	34.00	37.00
14.00	101.50	98.20	93.50	35.50	33.30	29.30	19.00	56.50	36.10	39.50
15.00	91.10	91.10	81.30	30.70	30.50	25.10	16.00	49.60	38.40	27.00
16.00	103.50	98.80	97.10	33.30	30.50	28.40	18.20	54.50	36.10	42.00
17.00	90.00	93.50	85.40	29.00	29.00	25.80	16.30	47.00	34.10	16.00
18.00	80.50	76.10	68.40	24.80	24.60	22.50	15.20	44.30	31.30	17.00
19.00	97.30	88.20	89.00	30.30	28.80	26.50	17.50	49.30	34.00	31.00
20.00	104.30	108.50	102.00	32.90	31.10	28.40	18.40	53.80	35.60	42.30
21.00	93.40	100.10	88.20	28.30	28.00	24.80	16.00	49.50	37.00	28.50
22.00	94.00	94.50	85.50	30.60	29.60	25.50	17.20	50.00	34.00	37.00
23.00	91.20	101.10	83.80	27.60	27.60	22.90	16.00	43.80	32.00	24.00
24.00	113.50	106.30	109.10	33.00	31.80	26.50	17.50	54.60	35.00	39.00
25.00	94.50	109.20	91.50	28.30	28.30	23.90	15.90	47.50	34.60	24.50
26.00	94.30	92.50	87.70	28.00	28.00	24.10	15.80	43.30	31.70	20.00
27.00	82.40	93.40	75.30	28.80	28.80	23.50	15.30	48.20	31.90	25.50
28.00	88.20	101.00	80.40	28.30	28.30	23.60	16.00	46.00	31.60	18.00
29.00	96.30	89.30	88.50	32.40	30.50	27.50	18.70	51.50	34.50	35.00
30.00	102.30	102.00	95.60	32.50	31.80	28.00	17.80	54.10	36.00	44.00
31.00	96.20	106.90	87.70	31.00	31.00	25.90	16.50	50.90	31.60	25.50
32.00	92.90	94.30	80.50	29.50	29.50	24.10	14.60	46.40	34.50	22.50
33.00	88.30	95.00	72.20	29.20	29.20	23.50	14.20	51.50	32.60	29.00
34.00	119.80	120.00	119.00	38.30	37.00	31.00	19.90	65.00	42.00	52.00
35.00	110.60	104.60	103.20	35.70	35.20	30.40	19.50	57.90	40.50	41.50
36.00	100.60	121.80	101.00	30.50	30.40	24.50	16.60	54.30	35.90	31.00
37.00	114.50	108.00	106.20	36.10	35.00	32.50	19.80	60.50	41.50	55.00
38.00	95.50	91.00	91.00	30.00	28.50	25.90	17.20	48.60	34.10	35.00
39.00	88.80	100.00	83.60	29.30	29.20	24.80	16.80	50.50	35.60	32.00
40.00	83.80	96.90	73.60	31.70	31.70	25.80	15.80	56.50	38.00	25.00
41.00	104.40	96.20	95.10	32.00	30.00	27.50	18.00	52.00	33.60	49.50
42.00	95.60	86.20	87.50	28.80	28.10	25.60	19.50	46.30	34.50	32.00
43.00	99.90	118.20	101.50	34.00	34.00	28.20	17.50	58.20	39.80	27.00
44.00	92.90	102.20	87.50	31.00	31.00	25.90	15.50	51.60	36.20	22.00
45.00	97.30	96.20	92.50	34.40	34.40	26.50	16.60	51.50	36.70	30.00
46.00	88.80	99.00	88.50	29.60	29.60	24.80	16.00	50.00	35.60	25.00
47.00	88.40	79.70	70.50	27.30	27.10	24.60	15.00	52.80	35.90	27.00
48.00	104.80	99.40	86.50	32.50	31.50	28.40	17.60	53.00	35.80	45.00
49.00	96.50	90.50	89.70	31.80	30.10	28.40	19.40	53.40	34.60	50.00
50.00	85.20	92.50	71.40	26.30	26.30	22.90	15.30	48.00	33.30	29.50
51.00	101.10	99.50	96.70	30.90	30.00	26.60	18.40	53.90	36.00	42.00

C1	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31
52.00	110.00	104.00	105.00	34.60	32.50	28.50	19.30	56.10	39.10	48.00
53.00	102.80	104.50	101.20	33.70	32.40	30.10	19.10	57.40	36.20	48.00
54.00	92.00	89.30	87.80	28.00	26.00	23.90	16.80	56.70	29.80	22.00
55.00	92.50	84.50	82.50	29.30	27.70	25.60	18.10	49.60	35.10	39.50
56.00	103.50	98.50	97.30	31.40	30.60	26.50	18.30	52.00	33.00	28.00
57.00	102.40	98.50	100.00	31.80	30.70	27.90	18.40	51.70	35.10	37.00
58.00	100.00	99.50	96.10	31.10	30.10	28.00	19.40	52.40	36.70	54.00
59.00	106.70	108.30	106.30	37.90	33.50	29.50	18.30	58.60	36.00	52.00
60.00	110.50	99.00	100.50	37.80	34.30	30.50	18.50	56.30	40.50	58.00
61.00	83.90	81.60	71.30	26.70	26.60	23.70	15.10	46.60	33.60	35.00
62.00	112.80	103.40	102.50	35.20	34.10	29.60	18.60	55.30	40.40	44.00
63.00	104.30	106.00	100.80	36.50	34.00	30.00	18.90	59.00	39.60	46.50
64.00	76.70	72.80	63.90	24.70	24.60	22.90	15.00	45.10	30.50	27.50
65.00	95.40	93.20	80.50	29.50	29.50	24.50	15.90	48.60	33.10	21.00
66.00	95.00	78.30	80.50	31.30	30.60	26.70	17.00	48.50	34.00	46.00
67.00	91.40	95.30	83.00	28.00	28.00	23.50	14.80	45.40	35.10	25.50
68.00	104.30	98.80	98.00	33.70	32.50	28.50	19.50	54.50	36.50	47.00
69.00	84.10	83.40	71.00	26.40	26.40	25.00	16.30	45.30	33.20	31.00
70.00	103.50	98.80	97.10	33.60	31.80	28.30	18.20	54.70	36.60	43.00
71.00	97.60	102.50	101.80	32.50	31.60	26.90	18.00	53.90	32.20	37.00
72.00	93.10	91.60	80.30	28.00	28.00	25.50	17.10	48.60	35.30	31.00
73.00	96.10	107.90	93.00	33.40	33.40	25.30	16.30	48.70	32.70	29.50
74.00	78.60	78.10	66.30	25.20	25.20	23.90	15.30	49.50	31.60	29.00
75.00	96.70	90.00	84.40	31.20	31.20	26.30	16.00	56.10	39.60	32.00
76.00	89.00	95.80	81.10	28.30	28.30	24.00	15.30	54.10	34.50	31.00
77.00	92.30	91.30	75.80	27.70	27.10	24.80	16.90	47.30	34.50	31.50
78.00	105.80	97.30	93.30	34.70	33.00	29.50	19.30	55.50	38.50	57.00
79.00	102.60	93.80	90.30	34.00	32.30	29.50	18.40	55.00	36.10	49.00
80.00	91.90	94.30	78.10	33.30	33.30	25.20	16.60	53.30	39.80	26.50
81.00	97.20	105.50	98.80	30.20	30.00	25.40	16.10	51.00	36.70	20.50
82.00	83.40	85.20	74.50	27.70	27.50	22.70	15.20	45.40	31.80	27.00
83.00	107.50	100.80	105.50	32.60	31.70	27.00	18.60	53.00	34.10	44.00
84.00	98.60	92.50	88.50	31.50	30.60	26.80	18.50	52.20	35.20	42.00
85.00	87.00	97.80	77.20	29.00	29.00	22.40	15.00	45.10	31.10	30.50
86.00	102.30	93.20	96.20	33.30	31.60	28.50	18.00	51.10	34.10	50.50
87.00	93.50	92.00	88.00	29.00	27.00	25.30	18.00	49.50	34.50	47.00
88.00	104.00	100.00	98.00	33.00	30.00	27.50	16.80	50.70	35.50	50.00
89.00	95.10	90.00	86.10	31.10	31.10	25.50	15.40	53.70	35.80	30.00
90.00	95.80	98.80	88.50	33.10	33.10	26.70	16.70	55.50	39.00	34.50
91.00	99.50	95.00	92.40	32.30	29.40	27.70	19.20	52.00	36.70	56.00
92.00	96.80	92.50	89.30	33.20	31.60	29.20	19.20	54.10	36.70	39.00
93.00	84.60	88.80	70.50	29.00	29.00	24.80	16.00	47.60	35.10	32.00
94.00	105.60	114.00	111.10	34.50	34.50	27.40	17.50	50.70	37.50	24.50
95.00	85.10	91.70	74.40	30.00	30.00	24.60	16.10	43.00	34.40	30.50
96.00	84.10	80.80	73.40	28.50	28.40	24.50	15.60	49.10	36.40	25.00
97.00	101.50	97.70	95.40	32.00	30.70	27.40	18.30	52.90	35.70	44.00
98.00	102.90	127.90	106.50	34.70	34.70	29.70	18.20	61.60	40.60	44.00
99.00	114.30	109.00	104.00	35.90	33.00	30.50	18.50	60.50	39.30	53.00
100.00	104.00	102.00	102.90	35.30	34.50	28.40	18.60	57.70	36.60	44.50
101.00	103.50	102.50	101.50	32.50	32.00	29.40	18.00	55.50	37.40	49.50
102.00	99.50	94.30	91.50	30.40	29.00	26.50	17.00	49.50	33.70	42.30

C1	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31
103.00	96.10	114.30	93.40	34.10	34.00	27.60	16.80	61.20	40.10	32.00
104.00	99.20	90.80	90.00	32.60	30.90	27.40	16.90	51.40	35.50	43.00
105.00	109.30	118.80	110.00	35.70	34.30	29.90	19.00	58.10	37.60	36.50
106.00	97.90	113.80	101.20	33.60	33.60	28.40	17.30	48.50	38.70	29.00
107.00	88.30	81.30	78.00	26.10	23.50	22.70	17.90	46.40	33.00	27.00
108.00	106.50	98.50	99.70	35.00	33.50	27.20	17.60	58.50	36.70	40.50
109.00	107.50	116.00	109.50	34.80	32.80	27.50	18.70	59.00	39.60	38.00
110.00	93.40	97.50	83.90	28.60	28.40	25.00	16.90	46.00	33.30	39.00
111.00	97.40	104.40	95.70	23.00	23.00	26.20	16.80	51.80	36.60	25.00
112.00	102.40	102.00	98.50	33.80	31.50	28.50	18.00	55.40	37.10	40.00
113.00	95.70	109.80	90.80	33.80	33.80	27.30	16.50	61.00	39.40	35.00
114.00	88.70	88.50	86.50	28.60	28.30	24.60	16.60	52.90	34.00	34.50
115.00	90.20	105.10	81.20	25.50	25.50	22.70	15.40	46.10	32.50	24.00
116.00	87.80	91.60	79.40	29.00	28.90	25.10	16.70	45.00	33.00	30.10
117.00	87.60	85.80	77.30	27.50	27.30	24.10	15.00	50.10	36.30	27.00
118.00	84.50	91.00	69.10	25.60	25.60	24.00	15.50	42.80	31.20	29.00
119.00	113.50	112.00	109.50	34.00	31.00	28.50	17.50	55.10	35.50	56.50
120.00	101.70	108.50	99.50	33.30	33.30	27.00	17.10	60.20	27.80	34.00
121.00	91.90	84.90	80.40	28.50	28.40	24.50	14.80	46.20	33.80	31.00
122.00	107.50	107.80	105.00	33.20	30.50	28.10	18.50	53.50	37.00	51.00
123.00	99.10	91.70	88.00	32.50	32.30	28.30	17.80	56.70	36.10	50.00
124.00	111.00	111.50	105.60	34.50	33.30	28.60	18.30	59.40	34.10	28.00
125.00	106.40	119.60	106.80	34.40	34.40	28.90	17.90	56.50	43.50	30.00
126.00	97.50	110.80	96.00	32.40	32.30	27.40	16.60	59.40	40.10	24.00
127.00	105.00	101.50	99.30	33.60	31.50	28.00	19.30	54.70	35.80	40.00
128.00	107.50	99.00	99.50	36.10	34.00	30.60	18.20	56.70	40.10	43.50
129.00	99.90	89.00	88.30	32.90	31.00	28.00	17.50	53.00	34.90	47.00
130.00	102.80	96.70	96.50	34.40	32.70	28.60	18.60	52.30	37.70	46.00
131.00	108.00	109.30	106.50	33.60	32.50	29.10	18.60	55.50	36.40	39.50
132.00	101.80	94.00	91.30	32.90	31.00	28.70	18.60	55.70	36.80	51.50
133.00	86.50	92.00	70.30	27.10	27.10	23.50	15.40	47.30	33.70	27.00
134.00	96.20	90.30	91.00	33.10	30.90	29.30	18.60	51.40	33.70	46.00
135.00	107.50	97.10	96.50	32.60	31.50	27.80	18.20	54.00	37.50	55.50
136.00	94.70	89.30	87.70	33.20	33.00	28.60	18.10	47.50	36.00	52.00
137.00	105.30	96.40	93.00	33.50	31.20	29.00	18.00	56.20	36.20	50.00
138.00	102.00	101.90	94.50	31.40	31.00	27.50	16.40	54.50	35.50	44.50
139.00	104.00	95.80	96.70	31.70	30.10	28.40	17.50	52.00	36.10	54.00
140.00	113.40	101.80	102.70	33.40	32.60	29.30	19.30	54.00	39.50	45.00
141.00	102.00	91.00	89.00	33.30	30.00	27.60	17.70	52.80	37.50	53.00
142.00	103.50	98.50	99.50	35.30	32.70	30.60	18.50	55.20	39.60	63.00
143.00	100.00	106.40	98.50	29.00	28.40	26.80	18.00	48.80	33.50	43.50
144.00	114.50	118.00	115.00	35.40	34.10	30.50	18.60	59.50	41.30	44.00
145.00	106.50	94.00	98.90	34.30	31.70	29.50	19.80	54.80	39.30	50.00
146.00	98.50	88.40	86.10	32.90	30.50	29.30	17.10	52.70	34.90	62.50
147.00	98.00	90.00	86.00	33.40	31.50	27.70	18.00	51.50	32.50	48.00
148.00	96.00	90.20	86.40	31.50	30.40	28.50	17.80	55.00	36.90	53.50
149.00	105.50	98.30	95.00	37.30	34.50	31.10	19.50	58.50	39.50	49.00
150.00	108.00	101.00	99.50	34.80	33.30	28.60	18.30	55.40	38.50	45.50
151.00	103.50	97.00	97.00	32.80	31.00	27.00	17.60	55.50	35.20	41.00
152.00	106.80	98.90	95.50	35.40	34.00	29.40	18.40	57.00	38.10	50.50
153.00	96.50	83.50	84.00	32.00	30.70	27.30	17.00	52.50	35.50	47.50

C1	C22	C23	C24	C25	C26	C27	C28	C29	C30	C31
154.00	96.50	87.50	87.50	35.10	32.20	28.10	18.50	54.60	38.50	56.50
155.00	92.30	82.40	80.00	29.10	26.70	25.50	17.00	46.00	33.30	47.00
156.00	85.30	84.30	75.50	26.60	26.60	23.70	16.60	48.10	34.30	35.00
157.00	107.80	105.00	101.80	35.00	33.30	30.50	19.20	56.30	37.90	28.00
158.00	102.20	100.40	98.50	33.50	30.00	27.10	17.10	54.00	33.80	45.00
159.00	102.00	98.70	93.70	31.30	31.10	27.40	17.60	51.50	35.10	43.00
160.00	85.40	88.70	73.80	27.10	26.70	23.50	16.30	47.40	35.30	29.00
161.00	99.00	96.80	89.50	33.00	30.50	26.50	18.00	52.60	36.60	44.00
162.00	88.30	90.50	74.00	29.40	29.40	23.40	15.10	46.90	32.80	26.00
163.00	86.40	83.00	73.50	28.20	28.10	25.20	15.20	49.70	35.20	28.50
164.00	86.80	72.20	67.40	26.90	26.70	23.10	15.10	48.10	33.40	30.50
165.00	96.40	81.30	80.80	34.10	32.50	28.10	18.20	52.20	36.10	48.00
166.00	116.40	109.80	109.50	36.00	34.50	29.00	17.80	56.30	38.80	48.00
167.00	102.50	102.00	98.10	33.80	32.50	27.50	17.50	52.50	34.60	53.50
168.00	92.00	81.40	76.90	26.70	26.60	23.30	15.80	47.00	33.70	30.00
169.00	89.70	90.00	81.30	29.40	29.40	24.00	15.30	52.30	32.60	26.00
170.00	87.50	78.80	74.50	26.90	26.80	23.40	14.70	48.70	34.70	25.00
171.00	94.50	82.50	96.30	29.90	29.80	26.50	17.10	48.10	34.00	35.50
172.00	75.60	73.20	62.90	24.10	23.60	22.30	14.60	45.60	30.50	18.00
173.00	88.00	86.50	73.00	28.30	28.10	25.70	16.00	53.60	36.30	29.00
174.00	89.50	79.50	75.80	32.40	30.50	26.50	16.50	52.50	36.70	42.50
175.00	102.10	85.00	85.00	33.50	32.00	27.50	16.90	54.50	39.00	46.50
176.00	83.80	93.30	76.40	27.30	27.20	23.90	13.80	52.20	36.20	23.50
177.00	88.00	81.50	78.40	28.30	26.50	23.50	17.50	46.60	34.20	19.50
178.00	103.50	104.00	100.30	32.50	35.00	28.00	18.80	54.10	38.30	46.00
179.00	88.00	84.10	75.10	25.50	25.40	22.50	14.80	42.60	30.70	30.00
180.00	92.30	94.10	83.00	34.60	34.60	27.00	15.30	56.70	36.00	27.00
181.00	80.40	86.10	75.50	26.60	26.50	24.00	16.10	44.60	32.80	25.00
182.00	86.50	81.00	74.00	28.10	26.50	24.50	17.40	50.10	34.60	40.00
183.00	91.50	105.20	88.60	31.30	31.30	24.50	15.00	53.30	35.50	17.00
184.00	85.30	78.10	71.60	28.60	28.50	24.90	16.00	55.30	39.50	31.00
185.00	108.00	105.80	105.30	32.10	30.50	26.50	17.50	53.60	35.80	40.00
186.00	88.40	102.50	79.60	30.40	30.40	24.90	15.40	56.60	37.40	25.50
187.00	85.90	87.00	75.10	27.80	27.80	24.00	15.60	53.00	34.20	28.00
188.00	92.50	82.20	80.50	34.10	31.40	28.30	18.10	52.00	34.50	58.00
189.00	102.50	99.00	95.90	36.20	32.50	28.50	18.00	55.00	34.50	61.00

C1	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41
1.00	47.00	55.00	4.00	9.00	18.50	80.00	120.00	94.00	24.60	40.10
2.00	19.00	40.00	15.00	0.00	21.90	85.00	155.00	103.00	13.60	34.00
3.00	34.50	70.50	11.00	19.00	27.60	70.00	143.00	102.00	30.20	40.30
4.00	41.00	94.00	8.00	27.00	37.60	96.00	130.00	108.00	24.80	42.30
5.00	22.00	46.00	12.00	30.00	39.10	77.00	139.00	91.00	21.10	42.40
6.00	42.50	88.00	1.00	7.00	28.10	77.00	111.00	91.00	24.50	39.90
7.00	33.00	66.00	40.00	25.00	44.30	90.00	151.00	122.00	27.30	45.10
8.00	18.00	39.00	0.00	0.00	39.20	70.00	152.00	95.00	17.80	37.90
9.00	46.50	93.00	0.00	0.00	38.20	86.00	122.00	95.00	21.40	34.80
10.00	30.00	60.00	20.00	0.00	33.00	70.00	109.00	82.00	24.20	43.10
11.00	35.50	68.50	0.00	0.00	24.60	66.00	118.00	80.00	20.10	36.50
12.00	29.00	64.00	0.00	0.00	12.00	63.00	122.00	94.00	19.80	36.90
13.00	38.00	75.00	1.00	1.00	6.50	93.00	132.00	103.00	22.60	40.90
14.00	36.50	76.00	5.00	7.00	10.60	66.00	142.00	91.00	20.50	39.90
15.00	26.00	53.00	5.00	0.00	37.00	80.00	119.00	87.00	23.10	39.00
16.00	39.50	85.50	1.00	2.00	15.50	76.00	145.00	100.00	23.40	40.20
17.00	15.00	31.00	2.00	2.00	40.50	72.00	130.00	92.00	18.70	38.70
18.00	22.50	39.50	0.00	0.00	11.70	84.00	131.00	102.00	21.50	44.20
19.00	34.00	65.00	3.00	20.00	24.30	93.00	120.00	103.00	21.80	40.90
20.00	40.70	83.10	0.00	0.00	0.00	81.00	122.00	94.00	19.80	40.20
21.00	22.50	51.00	29.00	10.00	33.70	93.00	141.00	120.00	17.60	39.30
22.00	35.00	72.00	0.00	0.00	0.00	97.00	137.00	110.00	23.40	42.50
23.00	23.50	47.50	1.00	0.00	32.00	74.00	130.00	100.00	18.60	39.40
24.00	39.00	78.00	0.00	0.00	20.60	74.00	132.00	95.00	21.20	38.60
25.00	29.00	43.50	0.00	0.00	34.60	88.00	132.00	92.00	18.50	37.90
26.00	20.00	40.00	0.00	0.00	31.70	81.00	114.00	78.00	17.40	35.80
27.00	25.00	50.50	0.00	6.00	31.90	70.00	102.00	96.00	21.00	39.40
28.00	17.00	35.00	4.00	0.00	31.60	86.00	120.00	95.00	18.80	39.70
29.00	31.00	66.00	6.00	0.00	24.00	57.00	133.00	82.00	22.40	41.10
30.00	42.00	86.00	7.00	13.00	12.00	77.00	126.00	104.00	23.60	39.60
31.00	24.50	50.00	1.00	3.00	34.00	69.00	94.00	79.00	21.50	38.20
32.00	21.50	44.00	0.00	0.00	42.10	70.00	138.00	91.00	17.10	38.90
33.00	12.00	41.00	2.00	2.00	29.90	99.00	132.00	110.00	17.50	41.40
34.00	56.00	108.00	9.00	16.00	28.10	80.00	142.00	99.00	18.60	35.80
35.00	40.50	82.00	0.00	0.00	10.20	90.00	144.00	103.00	20.80	38.70
36.00	26.00	57.00	0.00	0.00	21.00	88.00	152.00	93.00	16.70	38.00
37.00	51.00	106.00	5.00	15.00	34.60	91.00	119.00	94.00	20.80	39.70
38.00	34.50	69.50	0.00	0.00	16.40	97.00	143.00	115.00	21.60	40.00
39.00	33.00	65.00	4.00	3.00	35.60	74.00	140.00	90.00	17.00	40.50
40.00	25.00	50.00	0.00	0.00	40.10	85.00	140.00	96.00	19.90	40.60
41.00	43.00	92.50	0.00	20.00	29.40	92.00	129.00	100.00	23.50	42.10
42.00	38.50	70.50	2.00	0.00	5.40	75.00	131.00	85.00	24.00	42.60
43.00	24.50	51.50	4.00	0.00	18.30	82.00	144.00	95.00	14.00	34.40
44.00	23.50	45.50	0.00	0.00	36.20	84.00	153.00	106.00	24.00	38.10
45.00	26.50	56.50	6.00	2.00	12.40	77.00	151.00	105.00	18.30	38.50
46.00	23.00	48.00	0.00	0.00	25.90	71.00	137.00	87.00	19.60	40.10
47.00	28.00	55.00	0.00	0.00	24.60	72.00	128.00	93.00	20.70	41.30
48.00	40.50	85.50	0.00	11.00	9.00	81.00	113.00	84.00	26.60	39.80
49.00	48.50	98.50	7.00	20.00	14.00	61.00	94.00	65.00	26.90	41.90
50.00	27.50	57.00	4.00	0.00	22.10	95.00	156.00	118.00	17.40	40.80
51.00	42.00	84.00	0.00	0.00	19.70	77.00	95.00	74.00	24.30	39.60

C1	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41
52.00	47.00	95.00	9.00	14.00	28.50	63.00	112.00	79.00	24.90	38.10
53.00	51.00	99.00	0.00	6.00	36.00	73.00	92.00	76.00	26.90	40.90
54.00	27.00	49.00	0.00	0.00	29.10	87.00	129.00	107.00	25.60	41.50
55.00	40.00	79.50	6.00	6.00	9.20	65.00	98.00	86.00	28.30	41.40
56.00	27.00	55.00	0.00	0.00	0.00	82.00	103.00	130.00	20.10	39.30
57.00	39.00	76.00	8.00	15.00	15.90	100.00	146.00	116.00	19.70	40.80
58.00	52.00	106.00	4.00	18.00	23.50	80.00	121.00	93.00	23.90	40.40
59.00	46.00	98.00	0.00	15.00	23.70	100.00	132.00	109.00	23.80	39.40
60.00	59.50	117.50	10.00	23.00	35.10	79.00	107.00	80.00	25.30	39.40
61.00	32.00	67.00	10.00	20.00	29.90	65.00	115.00	81.00	23.70	42.50
62.00	39.00	83.00	7.00	0.00	19.00	93.00	155.00	124.00	26.80	37.40
63.00	47.00	93.50	11.00	0.00	30.50	90.00	140.00	113.00	28.40	38.80
64.00	28.00	55.50	10.00	10.00	29.50	80.00	147.00	107.00	27.40	43.80
65.00	20.50	41.50	18.00	0.00	33.10	72.00	118.00	84.00	21.10	41.00
66.00	51.50	97.50	25.00	25.00	31.50	105.00	150.00	118.00	25.60	39.90
67.00	27.50	53.00	0.00	0.00	34.00	73.00	133.00	93.00	21.00	40.90
68.00	56.00	103.00	0.00	4.00	33.80	85.00	119.00	96.00	25.10	38.50
69.00	32.00	63.00	15.00	0.00	26.00	74.00	102.00	74.00	25.30	42.30
70.00	43.00	86.00	18.00	22.00	17.00	110.00	91.00	73.00	30.80	40.40
71.00	39.00	76.00	0.00	2.00	23.90	72.00	119.00	87.00	21.60	37.80
72.00	30.50	61.50	5.00	10.00	31.90	85.00	130.00	92.00	19.60	41.30
73.00	25.00	54.50	10.00	0.00	37.40	105.00	156.00	130.00	20.10	39.00
74.00	29.00	58.00	23.00	65.00	47.10	84.00	131.00	104.00	28.80	41.20
75.00	34.00	66.00	38.00	46.00	39.30	80.00	132.00	100.00	27.10	38.20
76.00	29.50	60.50	22.00	12.00	25.00	74.00	142.00	82.00	25.10	41.00
77.00	33.50	65.00	32.00	71.00	38.30	78.00	113.00	81.00	21.90	41.80
78.00	59.00	116.00	14.00	24.00	34.70	95.00	133.00	103.00	23.70	39.80
79.00	51.00	100.00	12.00	24.00	39.70	80.00	107.00	82.00	27.40	40.10
80.00	27.00	53.50	11.00	5.00	32.30	90.00	155.00	130.00	17.60	37.80
81.00	16.50	37.00	0.00	2.00	36.70	74.00	107.00	86.00	18.80	37.70
82.00	25.50	52.50	1.00	0.00	31.80	92.00	137.00	107.00	17.10	42.10
83.00	40.50	84.50	1.00	5.00	16.50	103.00	124.00	109.00	20.60	39.10
84.00	41.00	93.00	14.00	10.00	27.10	59.00	103.00	62.00	26.60	41.50
85.00	27.50	58.00	8.00	0.00	32.60	84.00	127.00	102.00	23.40	40.20
86.00	54.00	104.50	10.00	0.00	39.90	89.00	132.00	99.00	24.80	39.60
87.00	47.00	94.00	0.00	17.00	29.10	72.00	105.00	77.00	26.50	43.10
88.00	48.00	98.00	8.00	18.00	21.30	97.00	124.00	115.00	23.80	41.80
89.00	26.50	56.50	1.00	0.00	17.80	60.00	109.00	65.00	22.50	40.40
90.00	36.00	70.50	4.00	3.00	40.50	88.00	136.00	102.00	19.30	38.50
91.00	47.00	103.00	1.00	32.00	30.20	99.00	147.00	116.00	20.40	42.70
92.00	40.00	79.00	10.00	14.00	15.90	92.00	120.00	96.00	25.00	40.90
93.00	30.00	62.00	4.00	10.00	24.80	98.00	127.00	104.00	20.80	43.00
94.00	21.00	45.50	6.00	0.00	31.30	88.00	142.00	112.00	18.20	34.50
95.00	28.00	58.50	32.00	4.00	30.90	77.00	125.00	92.00	22.30	41.80
96.00	20.00	45.00	15.00	0.00	20.00	99.00	137.00	119.00	20.80	41.30
97.00	45.50	89.50	6.00	4.00	30.80	86.00	122.00	94.00	19.80	40.20
98.00	42.00	86.00	0.00	0.00	9.00	96.00	139.00	113.00	17.30	35.10
99.00	42.00	95.00	3.00	11.00	28.80	78.00	107.00	91.00	24.40	37.80
100.00	46.00	90.50	15.00	15.00	34.20	84.00	118.00	88.00	24.00	38.00
101.00	45.50	95.00	11.00	9.00	20.00	90.00	133.00	91.00	22.10	38.50
102.00	40.70	83.10	0.00	0.00	0.00	85.00	122.00	102.00	23.40	41.30

C1	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41
103.00	30.00	62.00	10.00	0.00	36.60	99.00	153.00	112.00	16.40	37.60
104.00	46.00	89.00	10.00	17.00	13.80	95.00	139.00	106.00	23.10	40.40
105.00	39.50	76.00	8.00	0.00	13.10	98.00	146.00	130.00	18.20	36.50
106.00	29.50	58.50	10.00	3.00	31.20	70.00	148.00	94.00	17.10	36.90
107.00	29.00	56.00	0.00	19.00	39.40	71.00	115.00	72.00	27.20	45.50
108.00	40.00	80.50	10.00	17.00	25.90	67.00	101.00	71.00	27.80	38.50
109.00	32.00	70.00	0.00	0.00	26.40	84.00	140.00	108.00	18.40	39.80
110.00	34.50	73.50	8.00	15.00	27.80	95.00	132.00	102.00	21.40	40.80
111.00	24.50	49.50	16.00	0.00	16.60	65.00	125.00	76.00	17.90	37.30
112.00	42.50	82.50	4.00	0.00	38.90	80.00	119.00	91.00	24.10	40.50
113.00	36.00	71.00	2.00	0.00	30.50	67.00	137.00	85.00	18.40	36.70
114.00	34.00	68.50	11.00	32.00	2.20	95.00	123.00	105.00	26.00	42.30
115.00	21.00	45.00	15.00	0.00	26.00	78.00	124.00	88.00	21.30	39.90
116.00	25.00	55.10	10.00	20.00	40.60	97.00	148.00	126.00	18.00	40.20
117.00	23.50	50.50	15.00	20.00	31.80	88.00	128.00	107.00	22.30	41.10
118.00	28.00	57.00	0.00	0.00	36.60	85.00	118.00	92.00	22.80	42.70
119.00	50.50	107.00	4.00	9.00	20.70	72.00	135.00	87.00	23.80	38.90
120.00	33.00	67.00	2.00	0.00	22.50	95.00	151.00	126.00	14.00	36.80
121.00	28.00	59.00	10.00	10.00	40.10	84.00	128.00	98.00	21.00	40.60
122.00	50.00	101.00	4.00	12.00	33.20	82.00	137.00	97.00	23.10	39.50
123.00	50.50	100.50	10.00	18.00	9.40	85.00	117.00	90.00	26.20	40.80
124.00	27.00	55.00	0.00	0.00	0.00	82.00	118.00	97.00	20.10	37.70
125.00	31.50	61.50	0.00	5.00	35.00	80.00	154.00	102.00	14.30	35.50
126.00	28.00	52.00	3.00	0.00	24.90	68.00	117.00	80.00	20.40	37.00
127.00	35.50	75.50	0.00	0.00	13.50	82.00	118.00	97.00	20.10	41.60
128.00	42.00	85.50	7.00	10.00	27.90	71.00	110.00	75.00	25.30	39.10
129.00	42.00	89.00	15.00	14.00	10.00	89.00	109.00	90.00	27.50	41.40
130.00	42.50	88.50	4.00	15.00	38.70	91.00	119.00	103.00	24.50	38.80
131.00	39.00	78.50	10.00	20.00	26.90	100.00	130.00	106.00	23.80	36.70
132.00	42.50	92.00	0.00	40.00	40.70	73.00	102.00	74.00	28.10	40.00
133.00	28.00	55.00	20.00	0.00	39.90	81.00	148.00	105.00	25.30	41.50
134.00	52.00	98.00	5.00	0.00	22.30	78.00	116.00	83.00	27.70	41.60
135.00	51.00	106.50	11.00	33.00	38.90	78.00	112.00	79.00	26.10	40.70
136.00	40.00	92.00	5.00	6.00	9.50	78.00	119.00	88.00	26.90	41.50
137.00	54.00	104.00	0.00	24.00	42.90	91.00	117.00	94.00	27.00	40.50
138.00	46.00	90.50	7.00	22.00	8.70	80.00	112.00	90.00	27.30	39.30
139.00	43.50	107.50	0.00	8.00	28.00	92.00	143.00	104.00	22.40	42.50
140.00	48.00	93.00	0.00	13.00	24.50	75.00	108.00	87.00	25.20	39.70
141.00	51.00	104.00	11.00	20.00	28.80	73.00	114.00	93.00	32.80	41.40
142.00	54.00	117.00	7.00	0.00	25.30	99.00	124.00	109.00	24.60	38.90
143.00	49.50	93.00	0.00	25.00	28.60	71.00	123.00	92.00	26.10	40.70
144.00	39.00	83.00	0.00	0.00	0.00	77.00	118.00	97.00	20.10	37.90
145.00	46.50	86.50	15.00	26.00	27.20	64.00	104.00	70.00	32.90	41.50
146.00	59.00	121.50	13.00	21.00	38.50	92.00	125.00	104.00	32.00	41.70
147.00	46.00	94.00	5.00	12.00	18.80	90.00	116.00	101.00	26.70	42.60
148.00	48.00	101.50	5.00	30.00	23.40	76.00	103.00	88.00	28.10	42.00
149.00	44.00	93.00	4.00	0.00	18.80	80.00	116.00	83.00	24.80	38.80
150.00	41.00	86.50	0.00	10.00	12.50	80.00	119.00	90.00	25.40	40.30
151.00	42.00	83.00	8.00	20.00	28.10	92.00	118.00	96.00	26.60	40.30
152.00	52.50	103.00	14.00	24.00	29.10	85.00	129.00	98.00	29.80	39.40
153.00	45.00	92.50	15.00	21.00	28.80	81.00	102.00	84.00	27.20	41.40

C1	C32	C33	C34	C35	C36	C37	C38	C39	C40	C41
154.00	45.00	101.50	10.00	24.00	7.00	92.00	115.00	94.00	25.90	41.10
155.00	45.00	92.00	36.00	31.00	39.10	91.00	122.00	100.00	25.80	42.50
156.00	33.00	68.00	15.00	10.00	32.50	98.00	148.00	118.00	18.70	41.50
157.00	27.00	55.00	0.00	0.00	0.00	82.00	118.00	97.00	20.10	38.50
158.00	42.00	87.00	14.00	0.00	22.90	69.00	129.00	90.00	21.50	41.60
159.00	40.00	83.00	8.00	19.00	31.90	90.00	122.00	101.00	24.20	41.40
160.00	28.50	57.50	9.00	10.00	36.30	88.00	139.00	106.00	17.90	40.80
161.00	40.00	84.00	4.00	0.00	42.10	78.00	110.00	93.00	26.50	40.70
162.00	28.50	54.50	25.00	15.00	30.20	74.00	111.00	82.00	24.20	40.50
163.00	24.50	53.00	18.00	20.00	37.00	73.00	128.00	96.00	28.90	40.20
164.00	27.50	58.00	16.00	28.00	36.50	89.00	116.00	94.00	23.70	43.40
165.00	46.00	94.00	15.00	50.00	29.50	66.00	113.00	68.00	33.80	43.20
166.00	49.00	97.00	4.00	8.00	23.50	74.00	108.00	83.00	28.00	38.90
167.00	48.00	101.50	3.00	16.00	28.30	73.00	100.00	77.00	26.60	42.10
168.00	29.50	59.50	30.00	30.00	40.60	76.00	102.00	82.00	23.70	42.00
169.00	30.00	56.00	70.00	60.00	51.60	84.00	162.00	128.00	16.30	39.90
170.00	25.00	50.00	6.00	8.00	25.70	97.00	148.00	119.00	19.30	41.10
171.00	37.00	72.50	9.00	19.00	14.50	93.00	124.00	106.00	26.40	41.10
172.00	14.50	32.50	30.00	0.00	34.40	76.00	121.00	87.00	23.40	43.00
173.00	25.00	54.00	14.00	30.00	34.30	96.00	139.00	116.00	22.10	40.10
174.00	42.00	84.50	25.00	34.00	15.90	73.00	118.00	86.00	33.80	41.70
175.00	45.50	92.00	24.00	57.00	40.50	71.00	131.00	81.00	31.30	40.10
176.00	20.00	43.50	13.00	34.00	44.20	88.00	154.00	114.00	25.40	40.10
177.00	29.50	49.00	6.00	20.00	35.10	61.00	90.00	74.00	30.20	40.00
178.00	48.00	94.00	0.00	16.00	34.40	81.00	109.00	93.00	23.40	40.30
179.00	25.00	55.00	10.00	12.00	20.00	81.00	110.00	86.00	23.60	41.90
180.00	28.00	55.00	4.00	4.00	0.00	77.00	131.00	100.00	21.00	38.80
181.00	25.00	50.00	11.00	25.00	34.10	90.00	140.00	106.00	19.80	42.00
182.00	28.00	68.00	0.00	30.00	14.40	61.00	102.00	71.00	28.00	43.30
183.00	16.00	33.00	1.00	0.00	24.50	98.00	152.00	104.00	17.60	38.30
184.00	27.00	58.00	10.00	30.00	28.60	63.00	129.00	87.00	21.00	39.00
185.00	40.50	80.50	0.00	0.00	24.30	69.00	125.00	87.00	23.90	41.20
186.00	26.00	51.50	0.00	0.00	47.10	74.00	142.00	80.00	20.70	38.60
187.00	20.00	48.50	21.00	10.00	31.10	71.00	112.00	79.00	22.50	40.70
188.00	55.00	113.00	0.00	0.00	17.50	79.00	121.00	90.00	27.80	43.20
189.00	54.00	115.00	15.00	20.00	33.30	73.00	124.00	91.00	30.90	40.30

C1	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51
1.00	66.00	6.30	5.90	1.00	1.02	31.10	60.20	116.00	7.00	7.00
2.00	97.50	8.20	6.40	0.50	1.00	41.80	50.90	227.00	9.00	9.00
3.00	61.00	5.90	4.80	1.00	1.03	29.40	49.90	109.00	7.00	6.00
4.00	38.00	3.90	5.00	2.30	1.04	22.90	54.50	82.80	6.00	6.00
5.00	50.80	5.10	4.50	2.40	1.01	34.20	33.00	119.00	5.00	3.00
6.00	58.00	5.70	5.20	0.90	1.03	29.30	57.70	103.00	6.00	7.00
7.00	19.00	1.80	3.10	4.40	1.04	22.20	36.10	47.00	1.00	1.00
8.00	55.10	5.40	6.80	0.50	1.01	35.70	40.60	153.00	9.00	8.00
9.00	112.00	9.00	9.80	0.50	1.00	39.80	67.30	23.10	9.00	9.00
10.00	28.00	2.80	3.50	2.90	1.03	26.60	38.30	75.00	2.00	3.00
11.00	80.00	7.20	5.80	0.50	1.00	40.90	49.60	203.00	9.00	9.00
12.00	91.80	7.90	6.30	0.50	1.01	36.40	58.70	148.00	9.00	9.00
13.00	91.00	7.90	4.30	1.30	1.01	35.50	53.10	138.00	8.00	6.00
14.00	54.00	5.30	6.10	0.90	1.03	28.30	62.90	93.50	6.00	7.00
15.00	56.50	5.60	6.10	0.50	1.01	35.30	44.00	152.00	7.00	7.00
16.00	55.00	5.40	5.20	1.00	1.03	28.20	54.10	98.00	7.00	7.00
17.00	65.50	6.30	5.40	0.30	1.01	37.70	39.60	172.00	8.00	8.00
18.00	36.80	3.80	3.00	3.70	1.02	30.90	30.60	91.90	3.00	2.00
19.00	34.30	3.50	5.20	1.30	1.05	21.20	53.10	66.60	6.00	7.00
20.00	76.50	7.00	6.10	1.00	1.02	32.90	55.10	123.00	8.00	7.00
21.00	53.00	5.30	4.80	0.60	1.01	34.40	48.00	138.00	7.00	7.00
22.00	40.00	4.10	4.20	2.50	1.04	23.30	52.50	83.50	5.00	4.00
23.00	49.30	4.90	5.30	0.60	1.02	33.50	41.40	115.00	5.00	7.00
24.00	73.50	6.80	4.80	0.30	1.02	32.10	56.70	122.00	8.00	8.00
25.00	65.00	6.20	5.30	0.50	1.01	37.60	44.60	157.00	8.00	9.00
26.00	89.50	7.80	7.70	0.50	1.00	41.30	33.70	205.00	9.00	9.00
27.00	52.50	5.20	5.40	0.70	1.01	36.00	35.50	133.00	7.00	7.00
28.00	54.00	5.30	4.60	0.80	1.01	34.10	40.10	112.00	6.00	8.00
29.00	35.10	3.60	6.00	1.50	1.04	22.30	54.50	84.60	6.00	6.00
30.00	53.00	5.30	6.20	0.80	1.03	27.20	55.00	91.00	6.00	7.00
31.00	83.00	7.40	4.20	0.10	1.00	40.80	44.30	182.00	9.00	8.00
32.00	62.90	6.00	5.40	0.40	1.01	36.80	39.80	156.00	9.00	9.00
33.00	60.50	5.90	3.00	1.70	1.01	36.70	40.50	167.00	8.00	7.00
34.00	90.50	7.90	8.80	0.50	1.01	35.90	67.60	163.00	9.00	9.00
35.00	92.80	8.00	7.00	0.30	1.01	36.40	60.50	160.00	9.00	8.00
36.00	86.00	7.60	4.10	0.50	1.00	41.70	51.20	208.00	9.00	8.00
37.00	82.00	7.40	6.40	0.80	1.02	33.90	71.50	136.00	9.00	8.00
38.00	63.50	6.10	5.00	0.90	1.02	29.90	48.90	103.00	7.00	7.00
39.00	45.40	4.60	4.70	1.10	1.02	33.20	46.40	145.00	7.00	7.00
40.00	62.10	6.00	5.60	1.20	1.01	37.40	44.60	159.00	7.00	6.00
41.00	39.50	4.00	4.50	2.20	1.04	23.60	57.50	77.50	5.00	4.00
42.00	17.00	1.60	5.50	2.50	1.07	12.20	58.90	30.00	2.00	5.00
43.00	83.30	7.40	8.60	0.50	1.00	40.50	48.20	211.00	9.00	9.00
44.00	76.50	7.00	6.20	0.50	1.00	39.70	42.30	174.00	8.00	8.00
45.00	86.50	7.60	6.20	0.20	1.00	40.60	42.90	182.00	8.00	8.00
46.00	67.60	6.40	5.10	1.00	1.00	38.60	43.60	156.00	7.00	6.00
47.00	57.10	5.60	4.80	1.60	1.01	35.00	40.50	141.00	7.00	5.00
48.00	40.00	4.10	5.80	0.80	1.04	24.10	60.10	71.50	5.00	7.00
49.00	27.50	2.80	5.90	0.30	1.05	18.80	60.90	61.50	4.00	5.00
50.00	46.00	4.60	4.10	1.30	1.02	33.10	39.30	136.00	6.00	6.00
51.00	57.10	5.60	5.60	0.70	1.03	28.90	56.10	116.00	7.00	8.00

C1	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51
52.00	72.10	6.70	6.30	0.50	1.02	32.60	61.20	118.00	8.00	9.00
53.00	61.80	6.00	4.80	1.30	1.02	29.80	66.10	101.00	6.00	6.00
54.00	29.00	3.00	4.60	1.80	1.05	20.10	47.90	79.00	5.00	5.00
55.00	31.50	3.20	4.60	1.70	1.05	20.70	51.50	63.50	5.00	6.00
56.00	73.50	6.80	4.90	0.60	1.02	33.40	49.30	117.00	8.00	8.00
57.00	53.00	5.30	5.20	1.20	1.03	27.70	59.70	101.00	6.00	6.00
58.00	53.30	5.30	5.30	1.10	1.03	27.50	56.70	94.20	6.00	7.00
59.00	79.00	7.20	5.30	0.60	1.02	33.70	59.80	135.00	8.00	7.00
60.00	50.00	5.00	7.60	0.70	1.03	26.30	65.60	90.00	6.00	8.00
61.00	45.00	4.60	4.30	2.50	1.02	33.30	37.60	111.00	5.00	4.00
62.00	62.10	6.00	8.00	0.50	1.02	30.40	61.50	109.00	7.00	9.00
63.00	55.00	5.40	5.60	0.40	1.03	3.70	63.00	21.00	8.00	8.00
64.00	28.00	2.80	3.10	3.40	1.03	29.10	35.10	77.50	2.00	2.00
65.00	46.00	4.60	4.70	1.40	1.02	32.90	42.30	113.00	6.00	7.00
66.00	30.30	3.10	6.10	0.90	1.05	19.60	49.10	59.30	3.00	7.00
67.00	86.00	7.60	3.70	1.30	1.00	41.40	36.80	177.00	8.00	5.00
68.00	63.50	6.10	6.20	0.20	1.02	30.10	56.00	114.00	8.00	9.00
69.00	38.00	3.90	4.20	2.30	1.02	31.20	40.00	87.50	3.00	4.00
70.00	35.80	3.70	7.00	1.10	1.04	22.00	56.90	69.30	4.00	6.00
71.00	51.50	5.10	6.90	0.50	1.03	27.80	51.50	139.00	9.00	9.00
72.00	59.50	5.80	4.20	1.60	1.01	35.30	44.90	127.00	5.00	5.00
73.00	73.50	6.80	4.20	0.50	1.00	39.60	44.20	153.00	7.00	7.00
74.00	44.80	4.50	4.50	1.60	1.02	33.10	33.60	102.00	4.00	5.00
75.00	61.60	6.00	6.40	0.10	1.01	37.90	28.50	159.00	8.00	8.00
76.00	70.80	6.60	3.50	1.40	1.01	38.20	42.00	161.00	7.00	5.00
77.00	30.80	3.10	4.50	1.90	1.03	28.40	45.40	78.40	2.00	4.00
78.00	46.00	4.60	6.00	0.80	1.03	25.70	63.90	110.00	7.00	7.00
79.00	55.00	5.40	6.70	1.00	1.03	28.00	56.30	101.00	7.00	7.00
80.00	51.00	5.10	7.60	0.50	1.01	35.10	42.50	134.00	7.00	8.00
81.00	69.50	6.50	5.60	0.50	1.00	38.90	46.40	174.00	9.00	9.00
82.00	52.00	5.20	4.10	2.20	1.01	34.80	36.40	130.00	7.00	6.00
83.00	38.00	3.90	5.90	0.50	1.04	23.80	63.20	70.00	6.00	8.00
84.00	53.00	5.30	5.80	1.70	1.03	27.70	51.80	105.00	7.00	6.00
85.00	56.50	5.60	4.10	1.00	1.01	35.10	38.50	131.00	6.00	6.00
86.00	42.50	4.30	6.00	0.70	1.04	24.50	57.80	79.00	5.00	7.00
87.00	32.80	3.40	4.40	2.90	1.05	21.00	54.50	66.30	5.00	5.00
88.00	25.00	2.50	4.00	2.00	1.05	17.40	66.10	46.00	2.00	5.00
89.00	63.00	6.10	3.80	1.10	1.01	47.80	46.20	155.00	7.00	6.00
90.00	82.60	7.40	6.80	0.20	1.00	41.50	44.50	199.00	9.00	8.00
91.00	25.00	2.50	4.90	2.60	1.05	17.40	65.60	60.50	4.00	5.00
92.00	39.30	4.00	6.70	1.30	1.04	23.70	56.80	74.80	5.00	6.00
93.00	42.00	4.30	3.70	2.90	1.02	32.00	43.00	118.00	5.00	3.00
94.00	116.00	9.10	7.80	0.50	1.00	45.20	45.90	257.00	9.00	9.00
95.00	62.00	6.00	4.70	2.00	1.01	37.40	36.50	140.00	7.00	4.00
96.00	45.00	4.60	5.10	1.60	1.02	33.70	39.30	138.00	6.00	5.00
97.00	50.50	5.10	5.40	1.00	1.03	27.00	56.90	93.10	6.00	7.00
98.00	85.30	7.60	8.90	0.50	1.00	42.10	55.80	222.00	9.00	9.00
99.00	78.50	7.10	6.00	0.50	1.02	33.50	66.90	139.00	9.00	9.00
100.00	48.00	4.80	6.20	0.50	1.03	26.30	62.30	97.00	7.00	9.00
101.00	51.50	5.10	5.60	0.20	1.03	27.30	60.50	92.50	7.00	9.00
102.00	43.80	4.40	4.60	1.60	1.04	24.90	52.00	83.30	6.00	6.00

C1	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51
103.00	92.00	7.90	8.20	0.50	1.00	42.50	46.90	219.00	9.00	8.00
104.00	45.00	4.60	4.90	1.10	1.03	25.60	52.70	77.00	5.00	7.00
105.00	76.00	7.00	7.10	0.50	1.02	33.30	63.20	117.00	7.00	9.00
106.00	75.00	6.90	7.10	0.50	1.01	37.10	53.40	183.00	9.00	9.00
107.00	14.00	1.20	2.90	4.60	1.07	9.90	56.60	27.50	1.00	1.00
108.00	60.00	5.80	5.90	0.20	1.03	28.90	59.30	100.00	7.00	8.00
109.00	66.80	6.30	5.00	0.80	1.02	31.40	66.70	140.00	8.00	7.00
110.00	55.00	5.40	5.00	1.20	1.01	34.80	43.60	117.00	5.00	6.00
111.00	75.30	6.90	4.90	0.50	1.00	39.80	47.40	167.00	9.00	9.00
112.00	59.00	5.80	4.60	1.10	1.03	29.30	61.40	110.00	7.00	7.00
113.00	88.00	7.70	6.50	0.50	1.00	41.80	49.60	199.00	9.00	9.00
114.00	42.30	4.30	4.40	2.40	1.04	24.20	50.30	86.30	6.00	4.00
115.00	60.00	5.80	4.30	0.90	1.01	35.90	38.40	148.00	8.00	6.00
116.00	66.90	6.40	5.00	1.00	1.01	37.60	36.80	155.00	8.00	8.00
117.00	57.00	5.60	3.90	1.40	1.01	35.20	42.10	143.00	6.00	5.00
118.00	35.00	3.60	3.50	2.60	1.02	30.40	38.60	85.00	3.00	3.00
119.00	69.50	6.50	4.90	0.40	1.02	31.90	63.30	122.00	8.00	8.00
120.00	86.50	7.60	6.80	0.50	1.00	41.30	49.80	198.00	9.00	9.00
121.00	62.00	6.00	3.70	1.20	1.01	37.40	39.50	151.00	8.00	5.00
122.00	52.00	5.20	5.40	0.70	1.03	27.20	64.70	96.00	6.00	7.00
123.00	63.30	6.30	5.50	1.30	1.02	31.10	53.10	144.00	9.00	6.00
124.00	54.00	5.30	5.60	0.50	1.03	29.40	67.80	101.00	7.00	9.00
125.00	76.50	7.00	8.90	0.50	1.00	39.90	56.70	201.00	9.00	9.00
126.00	75.00	6.90	7.30	0.50	1.00	40.40	50.40	209.00	9.00	9.00
127.00	54.30	5.40	4.70	1.80	1.03	27.70	60.70	90.30	5.00	5.00
128.00	64.50	6.20	6.30	0.50	1.02	31.90	60.90	125.00	8.00	8.00
129.00	40.50	4.70	4.80	1.70	1.03	26.10	55.10	93.50	7.00	5.00
130.00	58.30	5.70	6.70	0.40	1.03	28.50	55.50	97.30	7.00	9.00
131.00	78.50	7.10	6.70	0.50	1.02	33.70	54.30	129.00	9.00	9.00
132.00	37.50	3.80	5.60	0.90	1.04	22.90	58.90	75.00	5.00	7.00
133.00	40.50	4.10	3.80	1.70	1.02	31.80	41.00	127.00	6.00	5.00
134.00	48.50	4.90	5.30	1.80	1.03	26.10	54.10	86.50	5.00	5.00
135.00	41.00	4.20	5.50	1.20	1.04	23.80	64.50	72.50	4.00	6.00
136.00	19.30	1.80	5.20	1.70	1.06	15.00	64.20	49.80	2.00	5.00
137.00	36.00	3.70	5.90	1.20	1.04	22.20	62.60	73.00	4.00	6.00
138.00	61.30	5.90	4.80	0.60	1.03	29.10	54.50	121.00	8.00	8.00
139.00	51.00	5.10	3.90	2.50	1.03	26.70	59.20	95.00	6.00	4.00
140.00	59.00	5.80	7.00	0.80	1.02	29.90	65.40	103.00	6.00	7.00
141.00	40.00	4.10	4.90	1.70	1.04	23.80	59.10	79.50	5.00	5.00
142.00	45.00	4.60	7.20	0.40	1.04	25.30	64.20	84.00	5.00	8.00
143.00	51.20	5.10	4.10	1.20	1.03	27.30	55.10	107.00	7.00	6.00
144.00	104.00	8.60	6.10	0.50	1.01	37.50	63.00	168.00	9.00	9.00
145.00	16.50	1.50	5.60	1.80	1.07	12.90	78.70	39.00	1.00	5.00
146.00	34.50	3.50	4.20	1.90	1.04	21.70	59.10	76.30	4.00	5.00
147.00	32.00	3.30	4.40	2.60	1.05	20.50	55.90	66.00	4.00	4.00
148.00	41.60	4.20	5.50	2.10	1.04	24.30	59.80	73.10	4.00	5.00
149.00	65.00	6.20	7.10	0.40	1.02	30.90	62.20	111.00	7.00	8.00
150.00	70.00	6.60	4.90	1.10	1.02	31.90	63.40	118.00	7.00	6.00
151.00	60.00	5.80	5.10	1.10	1.03	29.40	55.70	108.00	7.00	7.00
152.00	66.00	6.30	6.20	0.70	1.02	30.30	60.80	120.00	8.00	7.00
153.00	23.00	2.30	6.10	1.70	1.06	16.10	61.50	41.00	1.00	5.00

C1	C42	C43	C44	C45	C46	C47	C48	C49	C50	C51
154.00	27.70	2.80	6.50	1.40	1.05	18.70	63.20	53.70	2.00	6.00
155.00	20.00	1.90	4.50	2.50	1.06	14.10	54.20	35.50	1.00	4.00
156.00	42.00	4.30	4.40	1.80	1.02	32.80	41.10	114.00	5.00	4.00
157.00	59.50	5.80	5.90	0.20	1.03	29.30	62.30	107.00	7.00	9.00
158.00	40.00	4.10	5.00	1.80	1.04	23.40	60.60	85.00	5.00	5.00
159.00	58.50	5.70	4.90	1.70	1.03	28.70	54.70	98.50	7.00	5.00
160.00	44.40	4.50	4.60	1.30	1.02	32.60	39.60	119.00	6.00	6.00
161.00	46.00	4.60	5.00	1.20	1.03	25.60	55.10	93.00	6.00	6.00
162.00	40.80	4.20	4.90	1.10	1.02	31.70	41.60	107.00	5.00	6.00
163.00	56.10	5.50	5.80	1.00	1.01	35.70	37.40	135.00	7.00	7.00
164.00	38.00	3.90	3.60	3.10	1.02	30.40	39.00	106.00	4.00	3.00
165.00	29.80	3.00	5.40	3.00	1.04	19.60	58.40	57.10	2.00	3.00
166.00	82.00	7.40	5.80	0.40	1.02	33.90	66.80	133.00	8.00	8.00
167.00	57.00	5.60	4.00	2.20	1.03	28.70	60.60	104.00	7.00	4.00
168.00	34.00	3.50	3.40	2.10	1.03	29.20	45.10	83.00	2.00	4.00
169.00	38.50	3.90	5.10	0.90	1.02	31.10	42.30	110.00	5.00	6.00
170.00	50.00	5.00	4.30	1.50	1.02	33.30	37.60	119.00	5.00	5.00
171.00	17.40	1.60	5.70	1.50	1.06	13.10	55.90	43.50	2.00	6.00
172.00	36.00	3.70	3.60	2.80	1.03	28.90	30.80	81.00	3.00	3.00
173.00	64.60	6.20	6.20	1.00	1.01	37.20	38.90	139.00	6.00	6.00
174.00	29.00	3.00	6.20	1.90	1.05	19.10	51.30	55.00	2.00	5.00
175.00	44.80	4.50	6.30	1.00	1.04	25.10	54.50	74.80	4.00	7.00
176.00	68.60	6.50	4.70	1.00	1.00	38.80	37.50	150.00	7.00	7.00
177.00	15.00	1.30	5.10	2.10	1.07	11.00	52.10	29.00	1.00	4.00
178.00	63.00	6.10	4.90	1.10	1.02	29.80	60.00	118.00	7.00	7.00
179.00	37.00	3.80	3.40	2.10	1.02	30.40	39.30	73.00	2.00	4.00
180.00	81.60	7.30	6.20	0.40	1.00	40.60	43.60	192.00	9.00	7.00
181.00	43.80	4.40	4.80	2.10	1.02	33.10	35.10	110.00	6.00	6.00
182.00	30.00	3.10	4.80	3.10	1.05	20.30	48.40	84.30	5.00	5.00
183.00	44.00	4.50	5.30	0.10	1.01	34.50	46.20	125.00	6.00	8.00
184.00	48.50	4.90	6.60	0.90	1.02	33.40	42.30	128.00	6.00	6.00
185.00	69.00	6.50	4.10	1.00	1.02	31.70	60.50	111.00	7.00	7.00
186.00	60.80	5.90	5.80	0.40	1.01	36.90	43.10	162.00	8.00	7.00
187.00	50.30	5.00	4.80	1.20	1.02	33.90	40.60	116.00	5.00	5.00
188.00	23.30	2.30	4.30	3.00	1.06	16.60	61.40	56.80	2.00	3.00
189.00	78.00	7.10	4.80	1.00	1.02	32.90	54.90	130.00	8.00	6.00

C1	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61
1.00	12.10	27.50	1.00	1.00	1.00	1.00	5.00	5.00	2.00	2.00
2.00	10.30	38.20	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
3.00	12.20	25.40	1.00	1.00	2.00	1.00	4.00	3.00	2.00	1.00
4.00	12.80	23.10	1.00	1.00	1.00	1.00	4.00	3.00	2.00	2.00
5.00	12.80	20.40	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
6.00	12.00	27.20	1.00	1.00	2.00	1.00	4.00	5.00	2.00	2.00
7.00	13.60	17.60	3.00	2.00	2.00	1.00	4.00	3.00	2.00	2.00
8.00	11.40	27.60	1.00	1.00	1.00	1.00	4.00	7.00	2.00	2.00
9.00	10.50	39.70	2.00	2.00	1.00	1.00	5.00	1.00	2.00	2.00
10.00	13.00	20.00	3.00	2.00	1.00	1.00	5.00	6.00	2.00	2.00
11.00	11.00	32.70	1.00	1.00	3.00	1.00	4.00	4.00	2.00	2.00
12.00	11.10	33.10	1.00	1.00	1.00	1.00	3.00	3.00	2.00	2.00
13.00	12.40	25.80	1.00	1.00	2.00	1.00	5.00	2.00	2.00	2.00
14.00	12.10	27.80	1.00	1.00	4.00	1.00	3.00	3.00	2.00	2.00
15.00	11.80	26.80	1.00	1.00	2.00	1.00	4.00	4.00	2.00	1.00
16.00	12.10	26.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
17.00	11.70	26.60	3.00	2.00	2.00	1.00	4.00	2.00	2.00	2.00
18.00	13.30	19.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19.00	12.40	24.20	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
20.00	12.10	26.90	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
21.00	11.90	27.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.00	12.80	22.60	4.00	2.00	1.00	1.00	5.00	2.00	2.00	2.00
23.00	11.90	25.40	2.00	5.00	1.00	1.00	2.00	1.00	2.00	2.00
24.00	11.60	29.20	2.00	2.00	2.00	1.00	5.00	0.00	2.00	2.00
25.00	11.40	28.80	3.00	2.00	1.00	2.00	4.00	5.00	2.00	2.00
26.00	10.80	29.90	3.00	3.00	2.00	1.00	5.00	3.00	2.00	2.00
27.00	11.90	24.40	3.00	2.00	1.00	1.00	4.00	3.00	2.00	2.00
28.00	12.00	24.90	3.00	5.00	1.00	1.00	4.00	1.00	2.00	2.00
29.00	12.40	24.30	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
30.00	12.00	26.80	1.00	1.00	1.00	1.00	4.00	3.00	2.00	2.00
31.00	11.50	28.70	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
32.00	11.70	26.20	3.00	2.00	1.00	2.00	4.00	7.00	2.00	2.00
33.00	12.50	23.30	3.00	2.00	3.00	1.00	4.00	2.00	2.00	2.00
34.00	10.80	36.70	1.00	1.00	2.00	1.00	5.00	5.00	2.00	2.00
35.00	11.70	30.30	1.00	1.00	1.00	1.00	4.00	1.00	2.00	2.00
36.00	11.50	30.60	3.00	3.00	1.00	1.00	5.00	6.00	2.00	2.00
37.00	12.00	30.10	1.00	1.00	1.00	5.00	4.00	3.00	2.00	2.00
38.00	12.10	25.60	1.00	1.00	1.00	3.00	4.00	3.00	2.00	2.00
39.00	12.20	25.00	1.00	1.00	3.00	1.00	5.00	2.00	2.00	2.00
40.00	12.20	25.10	1.00	1.00	3.00	1.00	5.00	5.00	2.00	2.00
41.00	12.70	23.70	1.00	1.00	3.00	1.00	4.00	5.00	1.00	2.00
42.00	12.90	22.30	1.00	1.00	1.00	3.00	4.00	3.00	2.00	2.00
43.00	10.40	36.40	1.00	1.00	4.00	5.00	5.00	3.00	2.00	2.00
44.00	11.50	28.30	1.00	1.00	3.00	1.00	4.00	5.00	2.00	2.00
45.00	11.60	28.10	1.00	1.00	4.00	1.00	5.00	6.00	2.00	2.00
46.00	12.10	25.60	3.00	2.00	2.00	1.00	5.00	6.00	2.00	2.00
47.00	12.50	23.20	3.00	2.00	2.00	2.00	5.00	2.00	2.00	2.00
48.00	12.00	27.10	4.00	2.00	2.00	1.00	4.00	7.00	2.00	2.00
49.00	12.70	23.90	1.00	1.00	1.00	1.00	4.00	7.00	2.00	2.00
50.00	12.30	23.20	1.00	1.00	1.00	1.00	5.00	6.00	2.00	2.00
51.00	11.90	27.30	1.00	1.00	2.00	1.00	4.00	2.00	2.00	2.00

C1	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61
52.00	11.50	30.90	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
53.00	12.30	27.10	1.00	1.00	3.00	1.00	5.00	4.00	2.00	2.00
54.00	12.50	22.60	1.00	1.00	1.00	1.00	5.00	5.00	2.00	2.00
55.00	12.50	23.40	1.00	1.00	2.00	1.00	4.00	5.00	2.00	2.00
56.00	11.90	27.00	1.00	1.00	2.00	1.00	4.00	4.00	2.00	2.00
57.00	12.30	26.10	1.00	1.00	2.00	1.00	4.00	4.00	2.00	2.00
58.00	12.20	26.10	1.00	1.00	2.00	1.00	5.00	4.00	2.00	2.00
59.00	11.90	28.80	1.00	1.00	2.00	1.00	5.00	6.00	2.00	2.00
60.00	11.90	28.60	1.00	1.00	3.00	1.00	5.00	3.00	2.00	2.00
61.00	12.80	21.20	1.00	1.00	1.00	1.00	4.00	1.00	1.00	2.00
62.00	11.30	31.70	1.00	1.00	1.00	1.00	4.00	4.00	2.00	2.00
63.00	11.70	29.50	1.00	1.00	2.00	1.00	4.00	3.00	2.00	2.00
64.00	13.20	19.10	1.00	1.00	3.00	1.00	5.00	2.00	2.00	2.00
65.00	12.40	23.60	1.00	1.00	2.00	1.00	5.00	1.00	2.00	2.00
66.00	12.00	24.70	1.00	1.00	2.00	1.00	5.00	6.00	2.00	2.00
67.00	12.30	23.60	1.00	1.00	2.00	1.00	4.00	3.00	2.00	2.00
68.00	11.60	29.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69.00	12.80	21.60	1.00	1.00	1.00	1.00	5.00	6.00	2.00	2.00
70.00	12.20	25.50	1.00	1.00	1.00	1.00	4.00	6.00	1.00	2.00
71.00	11.40	29.00	1.00	1.00	4.00	1.00	4.00	3.00	2.00	2.00
72.00	12.50	24.00	3.00	2.00	2.00	1.00	5.00	4.00	2.00	2.00
73.00	11.80	27.40	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
74.00	12.40	21.60	3.00	4.00	1.00	1.00	4.00	6.00	1.00	2.00
75.00	11.50	28.80	1.00	1.00	1.00	1.00	4.00	3.00	1.00	2.00
76.00	12.40	24.20	1.00	1.00	2.00	1.00	3.00	3.00	2.00	2.00
77.00	12.60	22.80	1.00	1.00	1.00	5.00	4.00	3.00	2.00	2.00
78.00	12.00	27.70	1.00	1.00	3.00	1.00	5.00	2.00	1.00	2.00
79.00	12.10	26.40	1.00	1.00	3.00	1.00	5.00	4.00	1.00	1.00
80.00	11.40	28.10	1.00	1.00	3.00	1.00	5.00	6.00	2.00	2.00
81.00	11.40	29.60	1.00	1.00	3.00	1.00	5.00	6.00	2.00	2.00
82.00	12.70	21.40	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
83.00	11.80	28.30	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
84.00	12.50	24.00	1.00	1.00	1.00	5.00	4.00	3.00	2.00	2.00
85.00	12.10	24.00	1.00	1.00	3.00	1.00	4.00	6.00	2.00	2.00
86.00	12.00	26.90	1.00	1.00	3.00	1.00	4.00	6.00	2.00	2.00
87.00	13.00	22.00	1.00	1.00	1.00	1.00	4.00	1.00	2.00	2.00
88.00	12.60	24.50	1.00	1.00	1.00	1.00	4.00	3.00	2.00	2.00
89.00	12.20	25.70	1.00	1.00	2.00	1.00	4.00	5.00	2.00	2.00
90.00	11.60	28.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91.00	12.90	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.00	12.30	25.10	1.00	1.00	3.00	1.00	4.00	3.00	2.00	2.00
93.00	13.00	21.40	1.00	1.00	3.00	1.00	5.00	1.00	2.00	2.00
94.00	10.40	36.50	3.00	2.00	1.00	1.00	4.00	4.00	2.00	2.00
95.00	12.60	22.10	1.00	1.00	1.00	1.00	2.00	1.00	2.00	2.00
96.00	12.50	22.80	1.00	1.00	2.00	1.00	5.00	6.00	2.00	2.00
97.00	12.10	26.30	1.00	1.00	2.00	1.00	5.00	7.00	2.00	2.00
98.00	10.60	37.10	3.00	2.00	2.00	1.00	5.00	1.00	1.00	2.00
99.00	11.40	32.40	1.00	1.00	2.00	1.00	2.00	5.00	2.00	2.00
100.00	11.50	30.30	1.00	1.00	2.00	1.00	5.00	4.00	2.00	2.00
101.00	11.60	29.40	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
102.00	12.50	24.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C1	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61
103.00	11.40	30.50	1.00	1.00	2.00	1.00	5.00	6.00	2.00	2.00
104.00	12.20	25.20	1.00	1.00	1.00	6.00	4.00	3.00	2.00	2.00
105.00	11.00	34.20	1.00	1.00	1.00	1.00	4.00	4.00	2.00	2.00
106.00	11.10	32.20	1.00	1.00	2.00	1.00	3.00	3.00	2.00	2.00
107.00	13.70	19.10	1.00	1.00	2.00	1.00	5.00	5.00	2.00	2.00
108.00	11.60	29.30	1.00	1.00	3.00	1.00	4.00	6.00	2.00	2.00
109.00	12.00	29.00	1.00	1.00	1.00	2.00	4.00	4.00	2.00	2.00
110.00	12.30	24.30	3.00	2.00	2.00	1.00	4.00	3.00	2.00	2.00
111.00	11.30	30.70	1.00	1.00	2.00	1.00	4.00	3.00	1.00	2.00
112.00	12.20	27.00	1.00	1.00	2.00	1.00	5.00	1.00	2.00	2.00
113.00	11.10	32.60	1.00	1.00	1.00	1.00	5.00	7.00	2.00	2.00
114.00	12.80	22.50	1.00	1.00	1.00	2.00	5.00	4.00	2.00	2.00
115.00	12.10	24.40	1.00	1.00	1.00	1.00	4.00	4.00	2.00	2.00
116.00	12.10	24.00	3.00	2.00	3.00	1.00	5.00	4.00	2.00	2.00
117.00	12.40	23.70	1.00	1.00	3.00	1.00	5.00	4.00	1.00	2.00
118.00	12.90	20.90	3.00	2.00	2.00	1.00	4.00	7.00	2.00	2.00
119.00	11.70	29.80	4.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00
120.00	11.10	32.40	1.00	1.00	1.00	1.00	5.00	3.00	1.00	2.00
121.00	12.30	24.10	4.00	2.00	2.00	1.00	4.00	1.00	2.00	2.00
122.00	11.90	28.50	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
123.00	12.30	25.40	1.00	1.00	3.00	1.00	5.00	5.00	2.00	2.00
124.00	11.40	32.10	1.00	1.00	3.00	1.00	4.00	3.00	2.00	2.00
125.00	10.70	36.00	1.00	1.00	1.00	1.00	1.00	5.00	2.00	2.00
126.00	11.20	31.90	1.00	1.00	1.00	1.00	4.00	4.00	2.00	2.00
127.00	12.50	25.30	1.00	1.00	2.00	1.00	3.00	1.00	2.00	2.00
128.00	11.80	29.10	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
129.00	12.50	24.40	1.00	1.00	1.00	1.00	2.00	4.00	2.00	2.00
130.00	11.70	28.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131.00	11.10	32.10	4.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
132.00	12.10	26.40	1.00	1.00	1.00	1.00	4.00	7.00	2.00	2.00
133.00	12.50	22.70	1.00	1.00	2.00	1.00	5.00	5.00	2.00	2.00
134.00	12.60	24.10	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
135.00	12.30	26.40	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
136.00	12.50	24.50	1.00	1.00	1.00	1.00	5.00	3.00	1.00	2.00
137.00	12.20	26.20	1.00	1.00	2.00	1.00	5.00	3.00	1.00	2.00
138.00	11.90	27.40	1.00	1.00	2.00	1.00	5.00	2.00	2.00	2.00
139.00	12.80	23.80	1.00	1.00	1.00	2.00	5.00	4.00	2.00	2.00
140.00	12.00	28.60	1.00	1.00	2.00	1.00	5.00	4.00	2.00	2.00
141.00	12.50	24.70	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
142.00	11.70	29.00	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
143.00	12.30	25.50	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00
144.00	11.40	32.20	4.00	2.00	2.00	5.00	4.00	7.00	1.00	1.00
145.00	12.50	25.90	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00
146.00	12.60	24.20	1.00	1.00	1.00	1.00	4.00	4.00	1.00	0.00
147.00	12.90	22.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
148.00	12.70	24.20	1.00	1.00	2.00	1.00	5.00	3.00	1.00	2.00
149.00	11.90	29.60	1.00	1.00	1.00	1.00	5.00	4.00	2.00	2.00
150.00	12.20	27.60	1.00	1.00	3.00	1.00	5.00	5.00	1.00	2.00
151.00	12.20	26.30	1.00	1.00	1.00	1.00	5.00	6.00	2.00	2.00
152.00	11.90	28.40	1.00	1.00	3.00	1.00	5.00	6.00	2.00	2.00
153.00	12.50	24.30	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00

C1	C52	C53	C54	C55	C56	C57	C58	C59	C60	C61
154.00	12.40	25.20	1.00	1.00	3.00	1.00	5.00	6.00	2.00	2.00
155.00	12.80	22.00	1.00	1.00	1.00	1.00	3.00	4.00	2.00	2.00
156.00	12.50	22.80	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
157.00	11.60	30.00	1.00	1.00	1.00	2.00	4.00	4.00	2.00	2.00
158.00	12.50	24.80	1.00	1.00	2.00	1.00	5.00	7.00	2.00	2.00
159.00	12.50	24.70	1.00	1.00	1.00	1.00	4.00	3.00	2.00	2.00
160.00	12.30	23.20	4.00	2.00	1.00	2.00	3.00	3.00	2.00	2.00
161.00	12.30	25.30	1.00	1.00	2.00	1.00	5.00	7.00	2.00	2.00
162.00	12.20	23.90	1.00	1.00	4.00	1.00	4.00	3.00	2.00	2.00
163.00	12.10	23.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
164.00	13.10	20.30	3.00	2.00	2.00	1.00	4.00	5.00	1.00	2.00
165.00	13.00	22.20	1.00	2.00	1.00	1.00	5.00	2.00	1.00	1.00
166.00	11.70	30.70	2.00	2.00	2.00	1.00	5.00	1.00	2.00	2.00
167.00	12.70	24.70	1.00	1.00	1.00	1.00	3.00	4.00	2.00	2.00
168.00	12.70	22.50	1.00	1.00	1.00	1.00	3.00	4.00	2.00	2.00
169.00	12.00	24.70	3.00	2.00	2.00	1.00	5.00	7.00	2.00	2.00
170.00	12.40	22.60	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
171.00	12.40	23.60	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
172.00	13.00	19.00	1.00	1.00	1.00	1.00	3.00	3.00	2.00	2.00
173.00	12.10	24.50	1.00	1.00	4.00	1.00	5.00	4.00	1.00	2.00
174.00	12.60	22.90	1.00	1.00	1.00	1.00	5.00	5.00	2.00	2.00
175.00	12.20	25.90	1.00	1.00	1.00	1.00	3.00	6.00	2.00	1.00
176.00	12.10	24.40	1.00	1.00	1.00	1.00	3.00	6.00	2.00	2.00
177.00	12.70	21.90	1.00	1.00	3.00	1.00	5.00	6.00	2.00	2.00
178.00	12.20	27.30	1.00	1.00	1.00	2.00	4.00	4.00	2.00	2.00
179.00	12.70	21.70	3.00	2.00	3.00	1.00	5.00	1.00	2.00	2.00
180.00	11.70	27.60	1.00	1.00	3.00	1.00	4.00	4.00	2.00	2.00
181.00	12.70	21.10	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
182.00	13.10	20.90	1.00	1.00	1.00	1.00	5.00	3.00	2.00	2.00
183.00	11.60	28.10	1.00	1.00	1.00	1.00	4.00	5.00	2.00	2.00
184.00	12.00	24.90	4.00	2.00	2.00	1.00	5.00	5.00	2.00	2.00
185.00	12.10	27.50	1.00	1.00	2.00	1.00	5.00	1.00	2.00	2.00
186.00	11.70	26.90	1.00	1.00	2.00	1.00	4.00	3.00	2.00	2.00
187.00	12.30	23.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
188.00	13.00	22.40	1.00	1.00	2.00	1.00	5.00	3.00	2.00	2.00
189.00	12.20	26.70	1.00	1.00	4.00	1.00	5.00	3.00	1.00	2.00

C1	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79
1	19	3	1	2	4	2	1	3	1	3	2	1	99	3	2	2	1	1
2	13	3	1	2	3	1	1	4	2	1	2	3	99	3	1	2	1	1
3	17	5	2	1	3	2	1	2	1	3	1	99	1	3	1	2	1	1
4	17	4	1	3	3	1	1	2	1	3	2	99	99	3	2	1	1	1
5	15	1	1	5	5	3	1	3	0	1	2	2	99	3	1	2	1	1
6	11	5	1	2	3	4	1	1	1	3	2	99	2	3	2	1	0	0
7	26	3	1	2	4	1	1	2	1	3	1	99	99	3	1	2	1	1
8	7	4	1	2	3	3	1	3	0	1	2	99	99	3	1	2	2	2
9	27	4	1	3	4	2	1	1	1	3	2	1	1	1	1	2	1	1
10	8	3	1	3	3	1	1	3	1	1	2	1	99	0	1	2	2	3
11	12	5	2	1	4	1	1	4	1	2	2	2	1	3	1	1	1	1
12	11	2	1	2	3	3	1	2	1	3	3	3	99	3	1	1	1	1
13	8	3	1	2	3	3	1	1	1	3	2	1	99	2	4	1	1	1
14	12	4	1	4	3	1	1	2	1	3	2	3	1	3	2	1	1	1
15	8	5	1	0	4	2	1	3	1	2	2	1	1	3	1	1	1	1
16	25	5	1	2	2	3	1	2	1	3	2	99	99	3	2	2	1	1
17	13	3	1	4	0	3	1	4	0	1	2	1	2	2	1	2	1	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	11	3	1	2	3	1	1	4	0	1	2	1	1	3	3	2	1	1
20	6	6	1	3	1	1	1	4	1	1	2	3	99	3	2	2	1	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	11	5	1	3	3	2	1	4	1	1	3	99	99	3	2	1	1	1
23	0	4	1	0	3	4	1	2	1	1	2	99	99	3	1	2	1	1
24	13	4	1	3	2	2	1	2	1	3	2	99	99	3	2	2	1	1
25	11	1	1	4	2	3	1	3	1	1	2	1	2	3	3	2	1	1
26	18	1	1	5	3	3	1	4	1	1	2	2	99	3	2	2	1	1
27	9	0	0	0	0	0	1	2	0	2	3	3	99	3	2	2	1	1
28	0	4	0	0	0	4	2	4	1	1	2	1	1	3	1	2	1	1
29	10	6	3	2	0	2	1	3	1	3	2	99	99	3	1	2	1	1
30	8	5	1	2	3	2	1	2	1	3	2	99	99	3	3	2	1	1
31	8	2	1	3	2	4	1	4	1	2	2	3	99	3	1	1	1	1
32	15	1	1	4	2	4	1	4	1	1	2	3	99	3	2	2	1	1
33	15	1	1	5	2	3	1	3	1	1	2	99	99	3	3	1	1	1
34	8	5	1	2	5	3	1	1	1	2	2	0	0	3	2	1	1	1
35	15	3	1	4	3	2	0	4	1	3	3	5	1	3	1	2	1	1
36	8	5	2	2	4	1	1	4	1	3	2	5	4	2	1	1	1	1
37	18	6	1	3	4	2	1	2	1	2	1	0	0	3	1	1	1	1
38	9	5	1	3	2	3	1	4	0	1	3	4	99	2	1	3	1	1
39	13	6	3	0	5	2	1	3	1	1	1	1	99	1	2	2	1	1
40	7	5	3	2	4	2	1	3	1	3	1	1	99	2	1	1	1	1
41	9	5	1	2	4	2	1	3	1	2	2	99	2	3	2	1	1	1
42	7	4	1	3	3	3	1	4	2	1	3	2	1	2	2	2	2	2
43	11	2	1	5	2	3	1	4	1	2	2	1	99	3	1	2	1	1
44	13	1	1	0	3	2	1	4	1	1	2	2	99	1	1	2	2	2
45	8	5	2	1	4	2	2	1	1	1	3	99	2	3	1	3	1	1
46	12	0	1	5	4	4	2	2	1	2	2	99	1	2	2	1	1	1
47	17	3	1	2	0	2	1	3	1	1	2	99	99	3	1	2	2	3
48	17	5	1	3	4	3	1	4	1	1	2	3	99	3	2	2	2	2
49	4	5	1	5	0	2	1	2	1	1	2	99	99	3	3	1	1	1
50	8	5	0	0	3	3	1	4	1	1	3	3	99	3	1	2	1	1
51	8	6	1	3	1	3	1	3	1	1	2	0	0	2	3	1	1	1

C1	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79
52	18	4	1	3	3	2	1	1	1	3	2	99	99	3	1	1	1	1
53	8	4	1	2	4	2	1	2	1	2	2	1	99	3	3	2	1	1
54	9	4	1	2	3	3	1	3	1	2	3	1	99	1	2	2	1	1
55	8	6	1	0	3	2	1	2	0	1	1	0	0	2	2	2	2	3
56	14	6	1	3	3	3	1	3	1	1	2	1	1	2	3	2	0	0
57	8	5	1	5	3	3	1	4	1	1	2	99	99	3	2	2	1	1
58	12	4	1	3	4	1	1	2	1	3	1	99	99	2	2	2	1	1
59	17	1	1	3	2	3	1	2	1	3	2	1	99	3	1	2	1	1
60	12	6	3	2	3	2	1	3	1	3	0	1	1	1	2	2	1	1
61	15	3	1	5	5	2	1	4	2	3	2	1	1	3	1	2	1	1
62	12	1	1	2	3	2	1	4	1	3	2	3	99	3	1	1	1	1
63	12	4	1	2	4	1	1	1	1	3	2	99	2	2	1	2	2	3
64	11	3	2	1	2	2	1	4	1	1	2	99	99	3	1	1	2	5
65	13	2	1	0	3	2	1	3	1	2	2	3	99	3	1	1	1	1
66	17	1	2	1	3	2	1	2	1	2	2	99	1	3	2	3	2	5
67	19	4	1	3	4	3	1	4	1	1	1	99	1	3	1	1	1	1
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	8	0	0	0	0	3	1	2	0	1	2	99	99	2	1	2	1	1
70	9	5	1	2	3	2	1	2	1	3	2	99	99	2	2	1	1	1
71	8	6	1	3	3	4	1	4	1	1	3	1	99	3	3	2	1	1
72	15	1	1	5	4	4	1	2	1	3	1	99	99	2	1	1	1	1
73	9	5	2	1	3	4	1	2	0	1	2	1	99	3	1	1	2	4
74	12	1	2	1	2	1	1	2	1	1	1	2	1	2	1	2	1	1
75	15	1	1	5	4	2	1	2	1	3	1	99	99	2	2	2	1	1
76	17	3	2	1	2	2	1	1	1	3	1	99	99	3	1	2	1	1
77	16	1	1	0	1	3	1	2	1	1	1	99	99	3	1	2	1	1
78	11	3	2	1	3	2	1	3	1	3	2	99	99	3	1	2	1	1
79	8	3	2	1	4	3	1	2	1	2	2	99	99	2	1	2	1	1
80	18	0	1	5	3	2	1	3	1	2	2	99	99	3	1	1	1	1
81	19	3	1	4	3	2	1	2	1	2	2	99	99	2	1	2	1	1
82	0	4	0	5	4	2	2	4	1	3	1	1	2	3	1	2	1	1
83	0	4	1	5	2	3	1	4	1	3	2	3	2	3	2	2	1	1
84	7	4	1	2	4	2	1	3	1	2	2	4	99	3	2	2	1	1
85	9	5	3	2	3	3	1	4	1	2	2	3	1	3	1	2	1	1
86	7	5	1	2	2	2	1	4	1	3	3	2	1	2	1	2	1	1
87	10	4	0	3	0	4	1	4	1	2	3	1	1	3	2	1	1	1
88	12	2	1	2	3	2	1	1	1	3	2	99	99	2	2	2	1	1
89	9	2	3	2	4	3	1	3	1	1	2	1	99	3	1	1	1	1
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	10	5	2	1	3	3	1	2	1	3	1	0	0	3	2	1	1	1
93	14	4	1	3	3	1	1	2	1	1	1	99	99	3	2	1	1	1
94	14	2	1	2	4	3	1	2	1	1	1	1	99	3	3	1	1	1
95	8	3	1	3	4	3	1	3	1	1	2	1	99	1	1	1	1	1
96	18	1	1	2	4	2	1	4	1	1	2	99	2	3	2	2	2	4
97	8	2	1	0	4	3	1	2	0	1	1	0	0	2	1	2	1	1
98	9	4	1	0	3	1	1	4	1	2	2	1	1	3	1	3	1	1
99	21	4	1	2	3	2	1	2	1	3	2	3	99	2	2	1	2	1
100	6	5	1	2	3	3	1	1	1	3	2	99	1	2	1	1	2	2
101	8	3	1	2	4	4	0	1	1	1	2	99	99	3	1	1	1	1
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

C1	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79
103	6	0	1	3	2	2	2	3	1	2	2	3	1	1	1	1	1	1
104	27	5	1	0	4	2	1	2	1	3	2	99	99	3	1	2	1	1
105	6	5	1	3	2	3	1	2	1	2	3	1	99	2	1	2	1	1
106	16	5	1	2	4	1	1	1	1	3	1	1	1	2	1	1	1	1
107	10	4	1	2	5	3	1	2	1	3	2	99	1	2	2	1	1	1
108	9	5	2	1	3	2	1	2	1	1	1	0	0	2	1	1	1	1
109	17	4	1	4	3	1	1	3	1	2	3	99	99	3	2	2	1	1
110	12	4	1	2	3	2	1	4	1	1	2	99	99	3	1	1	2	3
111	6	4	3	1	3	2	1	4	0	1	2	2	99	3	1	2	1	1
112	10	4	1	4	4	4	1	4	1	0	1	2	99	3	1	2	1	1
113	6	0	1	2	0	2	1	3	1	1	2	1	99	3	2	3	1	1
114	22	2	1	2	0	1	1	0	1	3	2	99	99	3	3	2	1	1
115	11	0	2	0	3	0	2	2	1	1	2	0	0	2	1	2	1	1
116	11	6	2	0	5	3	1	2	1	3	2	99	99	1	2	1	1	1
117	12	2	1	2	3	3	1	3	1	3	2	99	99	3	1	2	1	1
118	9	0	0	0	4	0	0	1	1	2	0	0	0	2	1	2	1	1
119	12	2	1	3	4	2	1	1	0	1	3	99	99	3	1	1	2	4
120	11	6	2	1	2	3	1	4	1	1	2	2	99	3	1	1	1	1
121	7	1	1	4	3	2	1	4	1	3	3	3	99	3	1	3	1	1
122	12	1	1	2	4	3	1	2	1	1	0	99	99	1	1	1	1	1
123	8	5	3	1	3	1	1	1	1	3	2	99	99	2	1	3	1	1
124	19	4	3	2	2	2	1	4	1	3	4	3	1	3	2	1	2	4
125	8	1	1	3	5	2	1	2	1	3	3	99	99	3	1	1	1	1
126	8	5	2	1	4	2	1	4	1	3	2	1	99	1	1	1	1	1
127	12	5	0	0	0	0	0	0	0	1	2	99	1	3	2	2	1	1
128	11	4	1	2	4	2	1	4	1	2	2	1	99	3	1	2	1	1
129	26	4	3	2	4	2	2	1	0	1	2	99	1	3	1	2	1	1
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	9	4	2	1	5	4	1	3	1	1	1	0	0	3	1	2	1	1
132	9	6	1	0	5	2	1	2	1	1	2	1	99	3	1	2	1	1
133	10	1	1	1	4	2	1	4	1	3	2	99	1	1	1	3	1	1
134	16	2	2	1	3	2	1	1	0	1	2	99	99	3	2	1	1	1
135	17	3	1	3	4	2	1	3	1	2	2	0	0	2	2	2	1	1
136	12	2	2	1	3	4	1	1	1	3	1	99	99	3	2	1	1	1
137	11	1	2	1	2	2	1	3	1	2	2	99	1	3	2	2	1	1
138	18	4	1	2	5	2	1	1	1	2	2	99	99	2	1	1	1	1
139	9	3	1	2	3	2	1	3	0	1	2	1	99	3	1	1	1	1
140	8	4	1	3	3	3	1	3	1	1	2	99	1	1	1	2	1	1
141	13	2	2	1	3	3	1	2	1	3	2	0	0	3	1	1	1	1
142	12	4	1	3	4	2	1	4	1	3	2	1	99	3	2	2	1	1
143	13	13	4	1	2	5	2	1	1	1	2	99	99	3	2	3	2	4
144	19	3	1	2	4	2	1	4	1	3	2	1	99	3	2	2	1	1
145	6	3	1	3	3	2	1	3	1	3	2	0	0	2	1	2	1	1
146	9	3	2	1	0	1	1	1	1	3	2	99	1	3	2	2	1	1
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	8	3	1	2	3	3	1	2	1	3	1	99	99	3	1	1	1	1
149	15	4	1	2	3	2	1	4	1	3	2	99	99	3	2	1	1	1
150	9	5	2	0	2	2	1	2	1	3	2	99	1	2	1	2	2	1
151	26	4	1	2	3	2	1	2	1	3	3	1	99	2	1	2	1	1
152	12	3	2	0	5	2	1	2	1	1	1	0	0	2	1	1	1	1
153	12	5	2	1	5	3	1	1	1	2	0	0	0	2	2	0	1	1

C1	C62	C63	C64	C65	C66	C67	C68	C69	C70	C71	C72	C73	C74	C75	C76	C77	C78	C79
154	11	6	2	1	4	2	1	4	1	1	2	1	99	2	2	2	1	1
155	11	3	1	3	4	2	1	1	1	3	1	99	99	2	2	1	1	1
156	19	3	1	4	3	1	1	3	1	1	2	99	99	3	2	1	1	1
157	10	5	1	3	3	3	1	2	1	2	1	99	99	3	1	1	1	1
158	11	3	1	2	3	2	1	1	1	1	3	99	1	2	1	1	1	1
159	8	0	1	1	3	2	1	2	1	3	2	99	99	3	2	2	1	1
160	12	4	1	3	3	2	2	3	1	2	1	1	99	3	2	2	1	1
161	17	0	1	2	4	2	1	3	1	2	2	0	0	3	4	1	2	3
162	10	3	1	2	4	2	1	1	1	1	1	99	1	3	3	3	1	1
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	14	5	3	1	4	1	1	4	1	3	2	1	2	3	2	3	1	1
165	14	3	2	0	5	1	1	1	1	2	1	99	99	3	1	1	1	1
166	21	4	1	4	4	3	0	2	1	0	1	99	2	1	1	2	1	1
167	27	4	1	2	4	2	1	1	1	3	2	99	99	3	1	2	1	1
168	10	5	3	1	4	3	1	1	0	1	2	99	99	3	2	1	1	1
169	6	5	1	0	5	1	1	2	1	0	2	1	99	2	1	1	1	0
170	26	2	1	2	3	2	1	1	0	1	1	99	99	3	1	2	1	1
171	15	4	1	2	4	4	1	2	0	1	1	99	99	3	3	1	2	2
172	19	2	1	3	3	2	1	1	1	1	2	99	0	3	1	1	1	1
173	12	1	1	0	3	3	1	2	1	3	1	1	99	2	1	2	1	1
174	26	3	1	2	5	1	1	2	0	1	1	99	99	3	1	1	1	1
175	27	4	2	1	4	2	1	4	1	3	2	1	99	2	2	2	1	1
176	13	4	2	1	1	3	1	1	1	3	1	99	1	3	1	1	1	1
177	10	6	3	3	4	2	1	1	1	1	2	99	99	3	2	1	1	1
178	14	5	3	5	3	2	1	3	1	2	2	0	99	3	2	2	1	1
179	21	4	1	3	3	2	1	2	1	3	2	0	0	3	2	2	0	0
180	12	4	2	1	3	2	1	3	1	3	2	99	99	3	1	2	1	1
181	20	2	1	3	3	2	1	2	1	2	2	99	99	3	2	2	1	1
182	14	5	1	4	3	2	1	4	1	1	2	99	99	1	1	2	1	1
183	9	5	2	5	3	2	1	4	1	3	2	1	1	3	2	2	1	1
184	21	3	1	1	4	1	2	1	1	1	2	1	99	3	2	2	1	1
185	9	5	1	2	3	1	1	4	1	1	2	2	99	3	1	2	1	1
186	11	4	1	2	4	1	2	4	1	2	2	3	99	3	2	2	1	1
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	17	5	1	2	3	1	1	4	1	1	3	2	99	2	2	2	2	4
189	13	3	0	0	4	2	1	1	1	3	2	0	0	3	1	1	1	1

C1	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C93	C94	C95	C96	C97
1	98	98	3	2	2	1	1	1	1	1	2	1	2	2	1	3	2	3
2	98	98	1	1	1	1	1	1	2	1	2	2	2	2	1	3	3	3
3	98	98	1	2	2	2	1	2	2	1	2	2	2	3	1	3	2	3
4	98	98	1	3	1	2	2	1	1	1	1	1	2	3	1	3	1	3
5	98	98	1	2	1	3	1	1	1	1	1	1	2	1	1	3	1	3
6	0	0	0	2	0	2	0	1	1	1	2	1	1	2	1	3	1	3
7	98	98	1	1	1	3	2	1	1	1	2	2	1	2	1	3	3	2
8	4	99	3	3	2	2	1	1	3	2	2	2	2	0	1	3	1	3
9	98	98	1	2	2	1	3	1	1	1	2	1	1	1	1	3	2	3
10	99	99	1	2	1	3	2	1	1	1	1	2	2	1	1	3	2	3
11	98	98	1	1	1	1	1	1	2	1	2	2	1	2	1	3	2	3
12	98	98	1	2	2	1	2	2	2	1	2	2	2	3	1	2	2	3
13	98	98	5	2	2	2	1	1	1	1	3	2	2	2	1	3	2	3
14	98	98	5	1	2	2	2	1	1	1	2	0	1	1	1	3	4	3
15	98	98	2	3	2	3	3	1	2	1	2	2	2	4	1	3	1	3
16	98	98	3	4	1	2	3	1	3	2	2	1	2	2	1	3	1	3
17	98	98	1	3	2	2	2	0	2	1	2	1	1	1	1	3	3	3
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	98	98	3	4	2	3	2	1	1	1	2	1	1	1	1	3	2	3
20	98	98	2	2	0	2	2	0	3	1	3	1	2	3	1	3	2	3
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	98	98	1	2	2	3	2	1	1	1	2	1	1	2	1	3	2	3
23	98	98	1	0	2	2	3	1	2	2	2	2	1	3	1	0	0	3
24	98	98	4	2	2	2	2	1	1	1	1	1	1	3	1	3	2	3
25	98	98	1	1	2	1	3	2	1	1	2	1	1	2	1	3	2	3
26	98	98	1	1	1	3	1	2	2	2	2	1	2	2	1	3	1	3
27	98	98	1	2	2	3	2	2	1	1	0	1	0	3	2	3	1	3
28	98	98	1	0	2	2	3	1	2	2	2	2	1	3	1	0	0	3
29	98	98	1	2	2	3	3	1	2	1	1	1	0	2	1	3	0	3
30	98	98	2	2	1	2	1	1	1	1	1	2	0	4	1	3	1	3
31	98	98	1	1	2	2	2	2	3	2	1	2	2	2	1	3	2	3
32	98	98	4	2	1	2	2	2	2	1	1	2	2	3	1	3	3	3
33	98	98	1	1	2	1	3	2	2	1	3	2	2	3	2	3	1	2
34	98	98	5	4	2	1	1	1	1	1	2	1	2	2	1	3	2	3
35	98	98	3	2	2	1	2	2	2	1	2	1	2	3	2	3	3	3
36	98	98	1	2	2	1	1	2	1	1	2	2	1	1	1	3	1	3
37	98	98	3	2	1	2	1	1	1	1	1	1	0	2	1	3	1	3
38	98	98	4	4	2	2	2	0	3	1	3	1	2	4	2	3	1	3
39	98	98	1	2	1	2	1	0	0	1	1	1	0	1	1	0	3	3
40	98	98	1	3	2	2	1	1	1	1	1	2	1	2	1	3	1	3
41	98	98	4	3	2	4	1	1	1	1	1	2	1	2	1	3	1	3
42	99	99	1	2	2	3	2	1	1	1	2	1	2	1	2	3	4	3
43	98	98	1	2	2	1	2	1	1	1	2	1	2	2	1	3	1	3
44	99	99	1	2	1	1	2	1	1	1	2	2	2	2	1	3	2	3
45	98	98	1	2	2	1	2	2	2	1	2	1	0	3	2	3	1	3
46	98	98	1	3	2	2	1	2	1	1	2	1	1	1	1	1	2	3
47	99	99	1	2	1	2	2	1	2	1	2	2	1	3	1	2	2	3
48	99	99	5	2	2	2	2	1	2	1	2	1	0	1	1	3	2	3
49	98	98	1	1	1	3	1	0	0	1	1	1	0	3	1	3	0	3
50	98	98	1	1	2	3	2	3	1	2	2	1	2	2	1	3	1	3
51	98	98	1	1	2	2	2	1	1	1	1	1	1	2	1	3	1	3

C1	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C93	C94	C95	C96	C97
52	98	98	4	2	1	1	1	0	0	1	2	2	2	1	1	3	2	3
53	98	98	1	1	1	2	2	1	2	1	1	1	2	2	1	3	1	3
54	98	98	1	2	2	4	2	1	2	1	3	1	2	2	1	3	1	3
55	99	99	1	3	2	3	1	1	1	1	2	2	2	1	1	3	1	3
56	0	0	0	1	2	2	3	1	1	1	3	1	2	1	1	3	2	3
57	98	98	1	1	2	2	2	1	1	1	2	2	2	2	1	3	1	3
58	98	98	1	2	1	3	2	1	1	1	1	0	0	2	1	3	2	3
59	98	98	1	3	2	1	2	2	2	1	1	1	0	2	1	2	2	2
60	98	98	1	3	2	2	1	1	1	1	0	1	1	1	1	3	1	3
61	98	98	1	2	2	3	1	1	1	1	1	1	2	3	1	3	2	3
62	98	98	2	3	1	2	3	1	1	1	1	2	2	4	2	3	1	3
63	99	99	1	3	2	1	1	1	1	1	2	2	0	2	1	2	3	3
64	99	99	1	2		3	3	3	3	1	1	2	1	2	1	1	2	2
65	98	98	3	3	2	3	3	1	2	1	1	1	1	1	1	3	1	3
66	99	99	1	1	2	3	3	1	3	1	2	2	1	2	1	3	2	3
67	98	98	1	3	1	3	2	1	1	1	1	1	1	1	1	3	2	3
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	98	98	4	3	1	3	2	1	1	1	1	1	0	2	1	3	1	3
70	98	98	1	3	1	3	1	1	1	1	1	1	2	2	1	3	2	3
71	98	98	1	3	1	2	2	1	1	1	1	2	1	2	1	3	1	3
72	98	98	1	0	0	2	1	1	1	1	1	1	1	2	1	3	1	3
73	99	99	1	2	2	1	2	1	2	1	2	1	0	2	1	3	4	3
74	98	98	1	2	1	3	1	1	1	1	1	1	1	3	1	3	4	3
75	98	98	1	2	0	2	1	1	1	1	1	2	1	1	1	2	3	3
76	98	98	1	3	1	2	1	1	2	1	2	2	0	3	1	3	2	3
77	98	98	1	2	1	3	1	1	1	1	1	1	0	2	1	3	1	3
78	98	98	3	3	2	2	2	2	2	1	2	1	2	2	2	3	2	3
79	98	98	1	3	2	2	3	1	2	1	1	1	0	1	1	3	2	3
80	98	98	1	3	2	1	3	1	2	1	2	2	2	2	1	3	1	3
81	98	98	1	1	2	1	1	1	1	1	2	1	2	1	1	3	1	3
82	98	98	1	1	2	3	1	1	2	1	1	1	0	0	1	3	1	3
83	98	98	1	2	2	2	1	1	2	1	2	1	2	3	1	3	1	3
84	98	98	3	5	1	3	2	1	2	1	2	1	2	2	1	3	1	3
85	98	98	1	2	1	3	2	1	0	1	2	2	2	2	1	3	2	3
86	98	98	4	2	1	3	2	1	2	2	3	2	2	2	1	3	2	3
87	98	98	4	1	2	3	1	3	1	1	1	1	2	2	2	4	3	3
88	98	98	1	2	1	3	3	1	3	1	2	1	1	2	2	3	3	3
89	98	98	1	2	1	2	1	1	1	1	1	2	2	2	1	3	1	3
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	98	98	1	1	1	3	1	1	1	1	2	2	1	2	1	3	1	3
93	98	98	1	2	2	3	1	1	1	1	2	1	1	2	1	3	1	3
94	98	98	1	2	1	1	1	1	1	1	1	1	0	1	2	3	1	3
95	98	98	1	2	2	3	2	2	1	1	2	2	2	2	1	3	1	3
96	99	99	1	3	1	2	2	1	1	1	2	1	1	2	1	3	3	3
97	98	98	1	2	2	3	2	1	3	1	1	1	2	3	1	3	1	3
98	98	98	3	2	1	2	3	2	1	1	2	2	2	1	1	3	1	3
99	99	3	1	2	1	1	2	1	2	1	2	2	1	1	1	3	1	3
100	99	99	2	2	2	2	1	1	1	1	1	2	2	2	1	3	0	3
101	99	99	1	2	1	3	0	0	0	0	1	1	2	3	1	3	0	3
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

C1	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C93	C94	C95	C96	C97
103	99	99	3	1	2	1	2	1	1	1	3	2	1	2	1	3	2	3
104	99	99	1	1	1	3	1	1	1	1	2	2	1	2	1	3	2	3
105	99	99	5	2	1	1	3	1	1	1	3	2	2	2	1	3	1	3
106	99	1	1	4	1	1	1	1	1	1	1	2	1	2	1	2	2	3
107	99	99	2	2	1	4	1	1	1	1	2	2	1	3	1	3	2	3
108	99	99	1	4	2	2	2	1	1	1	1	2	1	1	1	3	2	3
109	99	99	1	1	1	2	3	1	2	2	2	1	1	2	1	3	4	3
110	99	99	1	2	1	2	1	1	2	1	2	1	1	2	2	3	1	3
111	99	99	1	2	2	1	2	1	1	1	2	1	0	3	1	0	1	3
112	99	99	1	2	2	2	1	1	1	1	1	1	2	4	1	3	2	3
113	99	99	1	0	0	1	2	1	1	1	1	1	2	2	1	1	0	3
114	99	99	1	2	1	3	2	2	2	1	2	1	2	3	1	3	2	3
115	99	99	1	2	1	3	1	1	1	1	1	1	1	2	1	3	1	3
116	98	98	1	2	2	3	1	1	1	1	2	2	1	1	1	3	1	3
117	98	98	1	2	2	2	1	1	2	1	2	2	2	3	1	3	2	3
118	98	98	1	0	2	3	1	1	1	1	1	1	0	0	1	2	1	3
119	99	99	1	2	1	1	2	2	1	1	2	2	2	2	1	3	2	3
120	98	98	3	1	2	1	3	3	3	1	2	1	2	4	1	2	1	2
121	98	98	5	2	2	2	1	1	1	1	2	1	2	1	2	2	3	3
122	98	98	1	1	2	2	3	1	1	1	2	2	2	2	1	2	2	3
123	98	98	1	1	1	3	2	3	3	1	2	1	2	2	1	3	1	3
124	99	99	1	1	0	2	1	1	1	1	3	2	2	2	2	3	2	3
125	98	98	1	2	2	1	1	1	1	1	1	1	1	1	1	2	1	3
126	98	98	3	3	2	2	1	1	1	1	1	1	1	1	1	3	2	3
127	98	98	6	3	2	3	3	1	3	2	2	2	2	2	1	3	2	3
128	98	98	6	4	2	0	2	1	2	1	1	1	1	1	1	3	0	3
129	98	98	1	1	1	3	1	1	1	1	2	1	1	2	1	3	2	3
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	98	98	1	2	2	2	1	0	2	1	1	1	2	1	1	2	1	3
132	98	98	1	3	2	3	1	2	1	1	1	1	2	1	1	3	2	3
133	98	98	1	2	2	2	1	1	2	2	1	2	2	2	1	2	1	2
134	98	98	5	3	2	3	1	0	2	0	2	2	2	2	2	3	2	2
135	98	98	1	3	1	3	1	1	1	1	1	1	1	2	1	3	0	3
136	98	98	1	1	1	3	3	3	1	1	1	1	1	1	1	3	1	3
137	98	98	4	1	1	2	2	1	1	1	2	2	2	1	1	3	2	3
138	98	98	1	2	1	2	1	1	1	1	2	1	2	2	1	3	2	3
139	98	98	1	3	2	3	2	1	2	1	2	1	1	2	1	3	1	3
140	98	98	1	2	1	2	2	1	1	1	2	1	2	2	1	3	1	3
141	98	98	1	2	2	3	1	1	1	2	1	1	1	1	1	3	2	3
142	98	98	3	4	2	2	2	1	1	1	2	2	1	2	1	3	2	3
143	99	99	1	4	1	3	1	1	2	1	1	1	1	1	1	2	1	2
144	98	98	6	2	2	1	1	1	2	1	2	1	1	2	1	4	4	3
145	98	98	2	2	2	3	1	1	1	1	2	2	0	2	1	3	0	3
146	98	98	1	1	2	3	2	1	1	1	1	2	1	1	1	3	2	3
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	98	98	1	2	2	3	2	2	3	1	1	1	1	1	1	2	2	3
149	98	98	5	2	2	2	1	1	3	1	1	1	2	2	1	3	1	3
150	98	0	1	2	1	2	3	1	1	1	1	1	1	1	1	3	1	3
151	98	98	1	3	0	3	1	1	1	1	2	2	1	1	1	2	2	3
152	98	98	3	3	1	2	1	1	1	1	1	2	0	1	1	3	2	3
153	98	98	1	4	2	3	1	0	0	1	1	1	1	1	1	3	2	3

C1	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C93	C94	C95	C96	C97
154	98	98	1	2	2	3	3	0	2	1	1	2	0	1	1	3	2	3
155	98	98	1	2	1	4	1	1	1	1	1	2	1	1	1	3	2	3
156	98	98	1	2	2	3	1	1	2	1	1	1	2	2	1	2	2	2
157	98	98	3	2	2	2	1	1	2	0	2	2	1	1	1	2	2	3
158	98	98	1	5	2	3	3	2	2	2	2	2	2	3	4	2	1	1
159	98	98	1	3	1	3	2	1	2	1	2	1	1	2	1	3	1	3
160	98	98	1	2	1	3	2	1	1	1	2	2	2	2	1	3	1	3
161	99	99	6	2	2	2	2	1	2	1	1	1	2	3	2	2	1	3
162	98	98	1	0	2	3	1	1	1	1	2	2	2	4	1	3	1	3
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	98	98	1	1	2	3	1	2	1	1	1	1	2	1	1	3	1	3
165	98	98	4	4	1	3	1	3	1	1	1	2	2	3	2	2	4	3
166	98	98	3	2	2	1	1	1	1	1	1	1	2	2	1	3	1	3
167	98	98	6	4	1	2	1	1	2	1	1	2	1	2	1	3	1	3
168	98	98	1	3	1	3	1	1	1	1	1	2	2	3	1	3	1	3
169	98	98	0	1	2	3	1	0	1	1	1	1	1	4	2	3	3	1
170	98	98	1	2	1	2	1	1	2	1	1	1	0	2	1	2	1	3
171	99	99	2	2	1	3	1	1	1	1	1	1	1	1	1	2	1	3
172	98	98	1	2	1	3	1	2	1	1	2	1	2	3	1	3	2	3
173	98	98	1	2	1	2	2	2	2	1	1	1	2	3	1	3	2	3
174	98	98	1	1	1	3	1	1	1	1	1	2	1	1	1	3	3	3
175	98	98	1	3	1	3	1	1	1	1	1	2	0	1	1	5	3	3
176	98	98	1	2	1	2	1	1	1	1	1	2	0	1	1	3	1	3
177	98	98	1	3	2	3	3	1	2	1	2	1	1	2	1	3	1	3
178	98	98	1	1	1	2	2	2	2	1	1	1	0	2	1	3	3	3
179	0	0	0	3	2	3	2	1	1	1	2	1	1	2	1	3	1	3
180	98	98	1	4	2	1	2	1	3	1	3	2	1	2	1	3	2	3
181	98	98	1	2	1	3	2	1	2	1	1	1	0	1	1	3	1	3
182	98	98	1	0	1	3	2	1	1	1	2	1	1	2	1	3	1	0
183	98	98	1	2	2	1	1	1	2	1	2	1	2	3	2	3	3	3
184	98	98	1	2	2	1	1	1	1	1	2	1	2	3	1	5	3	3
185	98	98	6	2	0	2	2	1	3	1	2	1	0	1	1	0	3	3
186	98	98	1	2	2	2	2	1	2	1	2	1	2	3	2	3	3	3
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	99	99	1	2	2	4	1	1	1	1	3	2	2	2	1	3	2	3
189	98	98	1	2	2	2	2	1	1	2	1	2	1	2	1	3	2	3

C1	C98	C99	C100	C101	C102	C103	C104	C105	C106	C107	C108	C109	C110	C111
1	1	1	0	4	4	1	3	2	2	3	2	1	1	1
2	1	3	1	4	2	3	2	1	1	1	1	1	1	1
3	1	4	1	4	2	3	2	1	1	1	1	2	1	2
4	1	4	1	5	5	1	2	1	1	1	1	3	2	1
5	1	4	2	5	4	1	2	1	1	1	1	1	1	1
6	1	3	2	2	2	1	2	2	2	1	1	2	1	1
7	1	4	2	4	5	0	3	1	1	1	1	2	1	2
8	1	3	1	5	5	1	2	1	2	1	1	1	1	1
9	1	3	2	5	2	3	2	1	1	1	1	1	1	1
10	1	4	2	5	2	2	2	1	1	2	2	1	1	1
11	1	3	2	5	4	1	2	1	2	2	1	2	2	1
12	2	3	2	4	4	1	4	2	2	2	1	2	2	2
13	2	3	1	2	2	1	2	2	2	1	1	2	1	2
14	1	4	1	5	3	0	2	1	2	1	1	2	2	2
15	2	4	2	4	1	1	2	1	1	1	1	1	1	1
16	1	4	2	5	5	1	2	2	2	1	1	2	3	2
17	2	3	2	5	5	1	2	1	1	1	1	1	1	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	1	2	1	4	1	3	2	1	2	2	2	2	2	1
20	0	3	2	5	5	3	2	0	3	1	1	1	3	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1	4	2	4	4	1	2	1	1	1	1	1	1	1
23	2	3	0	5	4	1	2	0	1	1	1	0	1	1
24	2	4	1	4	5	2	2	1	2	1	2	1	1	2
25	1	3	2	3	3	3	2	2	2	1	1	1	1	1
26	2	3	1	4	4	1	3	1	2	1	1	3	1	1
27	1	4	2	5	0	2	2	1	2	1	1	1	3	2
28	2	3	2	5	4	1	2	0	0	1	1	0	1	1
29	1	3	1	4	1	2	2	1	2	2	1	2	2	1
30	1	0	2	4	3	2	2	1	1	1	1	2	3	1
31	2	4	2	5	5	1	2	1	1	1	1	1	1	1
32	1	3	2	5	4	3	2	2	2	1	2	1	1	1
33	1	3	2	5	4	3	2	2	2	1	1	1	1	1
34	0	3	2	1	1	2	2	1	1	1	1	1	1	1
35	1	3	1	5	5	1	2	2	2	1	1	2	2	3
36	1	4	2	5	2	3	3	1	2	2	2	2	1	3
37	1	4	0	5	4	1	1	1	1	2	1	2	0	0
38	1	4	2	4	4	1	2	1	2	1	1	2	1	1
39	1	4	1	4	4	1	2	1	2	1	2	1	1	1
40	1	3	2	5	4	1	2	1	1	1	1	1	1	1
41	1	3	2	5	2	1	2	1	1	1	1	1	1	1
42	2	3	2	3	3	1	2	1	1	1	1	1	1	1
43	1	3	2	5	2	1	2	1	2	1	1	1	1	1
44	1	3	2	3	2	1	2	1	2	1	2	2	3	1
45	1	3	2	4	5	0	3	2	2	1	1	1	3	2
46	1	3	2	4	2	2	2	1	1	1	2	1	3	2
47	2	3	2	5	5	2	2	2	1	2	1	1	3	1
48	1	3	2	4	3	1	1	1	2	1	1	1	2	1
49	1	1	4	2	5	5	1	0	1	1	1	1	1	1
50	1	3	2	4	2	1	2	1	2	1	1	2	1	2
51	1	3	2	5	2	2	1	1	1	1	1	1	2	1

C1	C98	C99	C100	C101	C102	C103	C104	C105	C106	C107	C108	C109	C110	C111
52	1	3	1	5	2	3	2	1	1	2	1	2	1	1
53	2	3	2	5	2	2	2	1	1	1	1	1	1	1
54	2	3	2	5	4	1	2	1	2	1	1	2	1	1
55	2	3	1	5	5	1	1	3	1	1	1	1	1	1
56	1	3	2	5	2	2	1	1	3	1	1	1	2	1
57	1	4	2	5	4	1	2	1	2	1	1	1	1	1
58	2	4	2	4	4	1	2	1	1	1	1	1	1	1
59	2	1	1	4	5	1	2	2	2	1	1	1	1	1
60	2	4	2	5	5	1	2	1	1	1	1	2	1	1
61	1	3	2	3	4	1	2	1	1	1	1	1	1	1
62	2	4	2	5	5	2	3	1	2	1	1	2	2	2
63	1	1	2	5	4	3	2	1	1	1	2	1	1	2
64	2	2	2	4	5	1	2	1	2	2	1	1	3	2
65	1	3	2	5	2	0	2	1	1	1	1	1	1	1
66	2	3	2	4	4	3	2	2	1	2	1	1	1	1
67	1	4	1	4	4	1	2	1	1	1	1	1	1	2
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1	3	2	5	5	1	2	1	1	1	1	1	1	1
70	1	4	2	5	5	0	2	1	1	1	1	1	1	1
71	1	3	2	4	4	1	1	1	2	1	1	1	1	1
72	1	4	2	5	4	1	2	1	1	1	1	1	1	1
73	1	3	2	5	5	3	2	2	1	1	2	1	3	2
74	1	3	2	4	4	1	2	1	2	1	2	2	1	1
75	1	4	2	5	4	1	2	1	1	2	2	2	1	1
76	1	4	2	5	2	1	2	1	1	2	1	2	0	0
77	1	4	0	5	4	2	1	1	1	3	1	1	0	0
78	0	1	2	5	1	1	2	1	1	1	1	1	2	1
79	1	4	1	4	2	2	2	1	1	1	1	1	1	1
80	2	3	2	5	2	1	2	1	1	1	1	1	1	1
81	2	3	1	5	1	1	2	1	1	1	1	2	2	1
82	0	1	0	4	0	1	1	1	1	1	1	1	1	1
83	0	3	1	4	5	1	1	1	3	1	1	1	1	2
84	1	2	1	5	5	0	2	1	2	2	1	1	3	2
85	1	4	2	5	5	2	2	1	2	1	1	1	1	1
86	2	4	2	5	5	2	2	1	2	1	1	1	1	1
87	1	1	1	4	1	1	1	1	1	1	1	1	1	1
88	1	3	2	4	4	1	2	2	2	2	2	1	2	2
89	2	4	0	5	5	2	2	1	1	1	1	1	1	1
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	1	4	1	5	4	1	1	1	1	1	1	1	1	1
93	1	1	1	5	3	3	2	1	1	1	1	1	1	1
94	1	4	2	5	5	3	2	1	1	1	1	1	1	1
95	1	1	2	5	2	1	2	1	1	1	1	1	1	2
96	2	2	2	4	5	1	2	1	2	1	1	1	1	1
97	1	3	0	3	1	1	1	1	1	1	2	1	1	1
98	1	1	2	5	3	2	2	2	2	1	3	3	3	3
99	1	3	2	5	4	1	2	1	1	1	1	1	1	1
100	0	3	1	4	5	1	2	1	1	1	1	1	1	1
101	0	4	2	5	2	1	2	3	1	1	1	1	1	1
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0

C1	C98	C99	C100	C101	C102	C103	C104	C105	C106	C107	C108	C109	C110	C111
103	1	4	2	5	5	1	2	1	1	1	1	2	1	1
104	1	4	2	4	4	1	2	1	2	1	2	2	1	1
105	1	1	1	5	5	1	3	2	2	1	2	2	1	1
106	1	3	2	5	5	3	1	1	1	1	1	1	1	1
107	1	3	2	5	4	1	2	1	1	1	1	1	2	1
108	1	4	1	4	3	3	2	1	1	1	1	1	1	1
109	1	1	1	5	5	3	1	1	1	1	1	1	2	2
110	1	3	2	5	5	3	1	1	1	1	2	2	1	1
111	2	4	0	5	1	1	2	2	2	1	1	1	1	1
112	2	4	1	5	5	2	1	1	1	1	1	1	1	1
113	2	4	2	5	5	1	1	1	1	1	1	1	1	1
114	1	4	1	5	5	2	1	1	1	1	1	2	2	2
115	1	4	1	5	1	1	2	1	1	1	2	0	0	1
116	2	3	1	4	5	1	1	1	1	1	1	1	1	3
117	2	4	2	5	4	1	2	1	1	2	1	1	2	1
118	1	4	0	5	5	2	1	1	1	1	1	1	1	1
119	1	4	2	4	4	2	2	2	2	2	1	2	2	2
120	1	4	2	4	2	1	2	2	1	1	1	1	2	1
121	1	4	2	2	5	1	2	1	1	2	1	1	1	1
122	1	3	2	5	5	1	2	1	1	1	1	1	3	1
123	2	3	2	3	1	1	2	1	2	1	1	1	3	1
124	0	3	1	4	5	1	1	1	2	1	1	2	1	1
125	1	3	1	4	4	3	2	1	1	1	1	1	1	1
126	1	4	2	5	5	1	2	1	2	1	1	1	1	1
127	0	3	1	5	2	1	2	1	2	1	2	2	2	2
128	1	3	2	5	4	2	2	1	1	1	1	1	1	2
129	1	3	2	4	2	1	2	1	1	1	1	2	1	1
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	2	4	2	4	5	0	0	3	1	3	1	2	3	1
132	1	4	2	4	5	0	2	1	1	1	1	1	2	1
133	2	3	2	5	5	0	2	1	1	1	1	1	1	1
134	2	3	2	4	2	1	1	1	2	1	1	1	1	1
135	1	3	2	4	4	1	2	1	1	1	1	1	2	1
136	2	1	1	5	2	1	2	3	2	1	1	2	3	1
137	2	3	1	4	5	1	2	1	1	1	1	1	2	1
138	1	4	1	5	4	2	2	1	1	1	1	1	1	1
139	2	4	1	4	1	1	2	1	1	1	1	2	1	1
140	1	4	2	4	2	2	2	1	1	1	1	1	1	1
141	1	4	2	4	5	1	3	2	2	1	1	1	2	1
142	1	4	2	5	5	0	2	1	1	2	1	1	1	1
143	2	1	1	2	1	1	2	1	1	2	2	2	1	1
144	1	3	1	3	4	3	2	2	1	2	1	2	1	2
145	0	1	0	0	1	1	2	1	0	1	1	1	0	1
146	2	1	1	3	1	1	2	2	2	1	1	3	1	1
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	1	3	2	5	3	1	2	2	1	1	1	1	1	1
149	2	3	2	5	2	1	2	1	1	1	1	1	1	1
150	1	3	2	5	4	3	2	1	2	1	1	1	2	1
151	1	3	2	2	3	1	2	1	2	1	1	1	1	1
152	1	3	1	4	3	1	2	1	1	1	1	1	1	1
153	1	4	2	5	5	1	2	1	1	2	1	0	3	1

C1	C98	C99	C100	C101	C102	C103	C104	C105	C106	C107	C108	C109	C110	C111
154	1	4	2	3	1	1	2	2	1	2	1	2	3	2
155	1	4	2	5	5	1	2	1	1	1	1	1	1	1
156	2	1	1	4	4	1	2	1	1	1	1	1	1	2
157	1	4	2	5	5	3	2	1	1	1	1	1	1	1
158	2	4	1	4	5	2	3	2	2	2	2	2	2	2
159	1	3	2	5	2	2	2	1	2	1	1	1	1	2
160	2	3	0	5	4	1	2	2	1	1	2	2	1	1
161	2	3	1	3	2	1	2	1	1	1	1	2	1	1
162	1	3	2	5	5	3	2	1	1	1	2	3	1	1
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	2	4	2	4	2	1	2	1	1	1	2	2	1	1
165	2	3	1	4	5	2	2	1	1	1	1	1	1	1
166	1	4	1	5	4	1	1	1	1	1	1	1	1	1
167	1	3	2	3	4	1	3	1	1	2	2	2	1	1
168	1	4	2	4	5	1	1	1	1	2	1	1	1	1
169	2	4	2	5	1	1	2	1	0	1	2	1	1	1
170	1	3	2	4	5	1	2	1	1	1	1	1	1	1
171	1	3	1	4	5	1	1	1	1	1	1	1	1	1
172	1	3	2	4	2	2	2	1	1	1	1	2	1	1
173	1	4	2	5	4	1	2	1	1	1	1	1	1	1
174	1	4	2	5	2	1	2	1	1	1	1	1	1	1
175	1	3	2	5	5	3	2	1	1	2	1	2	0	0
176	2	4	2	4	5	3	2	1	1	2	1	2	0	0
177	2	3	2	5	2	1	2	1	2	1	1	2	2	2
178	0	3	2	5	4	1	2	1	1	1	1	2	1	3
179	1	4	2	5	5	2	2	2	1	2	2	1	1	2
180	2	3	2	3	2	1	1	1	1	1	1	2	1	1
181	1	4	2	5	5	2	2	1	1	1	1	2	1	1
182	1	4	0	5	5	2	2	1	2	1	1	1	1	2
183	2	3	2	5	4	3	2	1	2	1	1	2	1	1
184	1	2	2	5	1	1	1	1	1	1	2	2	1	2
185	1	3	2	4	5	3	1	2	2	1	1	1	1	1
186	1	3	2	5	5	3	2	1	2	1	1	1	1	1
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	1	4	2	5	5	2	2	1	2	1	2	2	1	1
189	1	3	2	5	4	2	2	2	2	1	2	2	1	1

C1	C112	C113	C114	C115	C116	C117	C118	C119	C120	C121	C122	C123	C124	C125
1	3	3	1	2	2	1	2	1	1	1	2	2	2	2
2	3	3	1	2	2	1	1	1	2	1	1	1	1	2
3	2	2	3	2	3	1	1	3	1	2	2	3	2	1
4	3	1	3	2	2	1	1	2	3	1	1	1	1	1
5	3	1	1	3	2	1	1	1	2	1	1	1	1	1
6	3	1	1	3	2	1	1	3	1	1	2	1	1	1
7	1	2	2	3	1	1	2	2	1	2	1	1	1	1
8	3	2	2	3	2	1	3	1	1	1	1	1	1	0
9	3	1	1	3	2	1	1	2	2	1	1	1	1	1
10	1	1	1	3	1	1	1	2	2	1	1	1	1	0
11	2	1	2	3	2	1	2	4	1	1	2	1	1	1
12	3	0	0	3	2	1	1	2	2	1	1	1	1	1
13	2	2	2	3	1	1	1	2	2	2	3	1	1	2
14	3	2	2	2	2	1	3	4	2	2	3	2	1	1
15	3	3	3	3	2	1	1	2	1	1	1	1	1	1
16	3	1	3	3	2	2	3	3	2	2	2	1	2	1
17	3	1	1	3	2	1	1	3	1	2	2	1	1	1
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	3	1	2	2	2	1	3	2	2	1	1	2	2	0
20	3	1	1	3	2	1	3	1	1	3	3	1	1	1
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	3	1	1	3	2	1	2	1	1	1	1	1	1	1
23	3	0	0	3	2	0	1	3	0	0	0	0	0	0
24	2	3	1	3	2	1	1	1	1	1	1	3	1	0
25	3	1	2	3	1	1	1	2	3	1	1	1	1	1
26	3	1	2	3	2	1	3	3	1	1	2	2	1	1
27	3	2	1	3	2	1	3	3	2	2	2	1	1	1
28	0	0	0	3	2	0	1	3	0	0	0	0	0	0
29	3	1	2	2	3	2	2	1	2	1	1	2	1	1
30	3	1	0	3	1	1	3	1	1	1	2	0	1	0
31	3	1	1	3	2	1	1	2	1	2	2	1	1	1
32	3	1	1	3	3	1	1	3	0	0	0	1	1	1
33	3	1	1	3	2	1	1	3	1	1	1	1	1	1
34	3	1	1	3	2	1	1	2	2	2	2	1	1	1
35	1	3	2	2	3	2	2	1	1	2	2	2	2	3
36	3	2	2	3	2	1	1	2	1	2	3	1	1	3
37	0	0	0	3	2	0	0	0	0	0	0	1	1	1
38	3	1	3	3	2	1	1	3	3	2	2	1	1	1
39	3	1	2	3	2	2	1	0	0	2	1	1	1	2
40	3	1	1	3	2	1	1	1	1	1	2	1	1	1
41	3	1	1	3	2	1	1	1	1	1	2	1	1	1
42	3	1	2	3	2	1	1	3	2	2	2	1	1	1
43	3	2	2	3	2	1	2	3	2	2	1	1	1	1
44	3	1	1	2	2	2	3	2	1	2	1	1	2	1
45	3	0	2	3	2	2	0	1	1	2	1	1	1	2
46	3	2	1	3	2	1	3	3	4	1	1	1	1	0
47	2	2	2	3	2	1	1	2	1	1	1	1	1	0
48	3	1	1	3	3	2	1	2	2	2	3	1	1	1
49	3	1	1	3	2	1	1	2	3	1	1	1	1	1
50	3	2	2	3	3	1	1	2	1	2	1	2	1	2
51	0	1	2	3	3	1	2	2	2	2	3	1	1	0

C1	C112	C113	C114	C115	C116	C117	C118	C119	C120	C121	C122	C123	C124	C125
52	2	1	1	2	2	2	3	3	2	2	3	1	2	1
53	3	1	2	3	2	1	3	2	1	1	1	1	1	1
54	3	1	2	2	2	1	1	1	2	1	2	1	1	1
55	3	1	1	3	2	1	0	1	3	2	1	1	1	0
56	3	1	1	3	3	1	1	1	2	1	2	1	1	0
57	3	1	1	3	2	1	1	3	2	1	1	1	1	1
58	3	1	2	3	4	1	2	3	2	1	1	1	1	2
59	3	3	3	3	3	1	3	3	1	2	2	1	1	1
60	3	1	3	3	2	1	3	1	1	1	1	0	1	1
61	3	2	3	3	2	1	2	2	1	2	2	1	1	2
62	3	1	1	3	2	1	2	1	2	1	1	1	1	1
63	3	1	2	3	2	1	1	2	2	2	2	1	1	1
64	3	2	2	3	2	1	3	2	4	1	1	1	1	1
65	3	1	1	3	2	1	1	2	1	1	2	1	1	1
66	3	1	3	3	2	1	1	2	2	1	3	1	1	1
67	2	3	2	2	2	1	1	2	2	1	1	1	1	1
68	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	3	1	1	3	2	1	0	1	1	1	1	1	1	0
70	3	3	3	3	2	1	1	1	1	1	1	1	1	1
71	3	1	1	2	2	1	1	3	3	1	1	1	1	1
72	3	1	1	3	1	1	1	2	2	1	1	1	1	1
73	3	1	1	3	2	1	3	2	1	1	1	1	1	0
74	2	1	2	2	2	2	1	1	3	1	1	1	1	1
75	2	1	2	3	2	1	1	1	1	2	1	1	1	1
76	0	0	0	2	2	0	0	0	0	0	0	1	2	2
77	0	0	0	3	1	0	0	0	0	0	0	1	1	1
78	3	1	0	3	2	2	3	2	1	2	2	1	1	1
79	3	1	1	3	2	0	1	1	1	2	2	0	1	1
80	3	1	1	3	2	1	3	2	2	1	1	1	0	0
81	2	2	1	2	2	1	1	2	2	1	1	1	2	2
82	2	1	0	2	2	1	3	2	2	1	1	1	1	1
83	2	1	2	3	2	1	3	3	1	1	1	1	1	1
84	3	2	3	3	3	1	3	3	1	2	2	2	1	2
85	2	1	2	3	3	1	1	3	2	1	1	1	1	1
86	2	1	2	3	2	1	1	2	2	1	1	1	1	2
87	3	1	1	3	2	1	1	2	1	1	1	1	1	0
88	3	2	2	3	2	1	1	3	1	1	1	1	2	2
89	3	1	1	3	2	1	1	1	1	1	1	1	1	1
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	3	1	2	3	2	1	0	1	1	1	1	1	1	1
93	3	1	1	3	2	1	1	2	2	3	3	1	1	1
94	2	1	1	3	2	1	1	2	2	1	1	1	2	2
95	3	1	2	3	1	1	1	2	1	1	1	1	1	0
96	3	1	1	3	1	1	1	1	2	1	3	1	1	1
97	3	1	1	3	2	1	1	2	1	1	1	1	1	1
98	1	2	2	1	2	1	3	4	1	1	1	2	1	0
99	3	1	1	3	2	1	1	1	2	1	1	1	1	1
100	2	2	2	3	2	2	2	3	1	1	2	2	1	0
101	3	2	2	3	4	1	3	2	1	1	0	1	1	3
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0

C1	C112	C113	C114	C115	C116	C117	C118	C119	C120	C121	C122	C123	C124	C125
103	3	1	2	3	2	1	1	2	1	1	2	1	2	1
104	3	1	1	3	2	1	1	2	2	1	1	1	1	1
105	3	1	2	3	3	2	1	2	1	2	2	2	1	2
106	3	1	1	3	2	2	1	1	3	1	1	1	1	1
107	3	1	1	2	2	2	3	2	2	2	2	1	1	1
108	3	1	1	3	1	1	3	2	1	1	1	1	1	2
109	3	1	1	3	2	2	3	2	2	1	3	1	1	2
110	2	1	1	2	2	1	1	3	1	1	1	1	1	1
111	3	1	1	3	2	1	1	2	2	2	2	1	1	1
112	3	1	2	3	1	1	1	1	1	1	1	1	1	0
113	3	1	1	3	3	1	1	3	1	1	1	1	1	1
114	3	2	1	3	2	1	2	1	2	1	1	2	2	2
115	3	1	2	3	2	1	0	1	1	2	2	1	1	1
116	3	1	1	3	2	1	1	1	3	1	3	1	1	1
117	3	1	1	3	2	1	3	2	1	1	1	2	1	1
118	2	1	1	3	2	1	1	3	2	1	1	1	1	1
119	3	3	2	3	2	2	3	3	1	1	1	2	1	1
120	3	1	2	3	2	1	1	3	2	1	2	1	1	1
121	2	1	1	2	2	2	1	2	1	1	1	1	1	2
122	3	1	3	3	2	1	3	3	1	1	1	1	1	1
123	3	0	0	3	2	1	1	2	2	1	1	1	1	1
124	2	1	1	3	2	1	1	2	2	2	2	2	1	1
125	3	1	0	3	2	1	1	2	1	2	2	1	1	1
126	3	2	2	3	2	1	1	1	2	1	1	1	1	1
127	0	0	0	0	0	0	3	3	2	2	1	2	2	0
128	2	2	2	3	2	1	0	1	2	1	1	2	1	1
129	3	1	1	2	2	1	2	1	2	1	1	1	1	1
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	3	3	2	0	1	1	3	3	1	1	1	3	1	0
132	3	1	1	2	2	1	2	1	1	1	1	1	1	0
133	3	2	2	2	2	1	1	3	1	2	2	1	1	1
134	3	1	2	3	2	1	1	1	1	2	2	1	1	1
135	3	1	1	3	2	1	3	3	2	1	2	3	1	1
136	3	1	3	3	2	1	2	3	2	1	1	1	1	1
137	3	1	2	3	2	1	1	2	2	2	3	1	1	1
138	3	1	1	3	2	1	3	1	2	1	1	1	1	1
139	3	1	2	3	3	1	3	3	1	2	2	1	1	2
140	3	1	2	3	2	2	1	1	1	2	2	1	1	1
141	3	1	3	3	1	1	2	1	1	2	1	1	2	1
142	3	1	1	2	2	1	2	2	1	1	1	1	1	1
143	3	1	1	3	2	1	3	1	1	1	1	1	1	1
144	2	2	2	2	2	2	1	1	2	1	1	1	2	2
145	0	2	2	2	2	1	3	1	1	1	1	1	1	1
146	3	2	3	3	3	3	3	2	1	2	2	1	1	1
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	3	3	3	3	2	1	1	1	2	1	1	1	1	1
149	3	1	1	3	2	1	3	3	1	1	1	1	1	1
150	3	1	1	3	2	1	3	1	1	1	1	1	1	1
151	3	1	2	3	2	1	1	1	2	1	1	1	1	1
152	3	1	1	3	2	1	1	2	2	1	1	1	1	1
153	3	1	0	3	2	1	3	3	1	2	2	0	1	1

C1	C112	C113	C114	C115	C116	C117	C118	C119	C120	C121	C122	C123	C124	C125
154	2	2	2	2	3	1	3	1	1	3	3	2	1	2
155	3	1	2	3	2	1	1	1	1	1	1	1	1	1
156	3	1	2	3	2	1	1	2	1	1	1	1	1	2
157	3	1	1	3	1	1	2	2	1	1	1	1	1	0
158	3	2	2	2	2	2	2	2	1	2	2	2	2	2
159	3	1	1	2	2	1	2	2	2	2	2	3	1	2
160	2	1	2	3	2	1	1	2	2	1	1	1	1	2
161	2	2	2	3	2	1	1	1	2	2	3	1	2	2
162	3	2	2	3	2	1	1	2	1	2	1	1	1	1
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	2	1	1	1	2	2	2	0	1	1	1	2	1	2
165	2	1	1	3	2	1	1	1	1	1	1	1	1	2
166	2	1	1	2	2	1	1	1	1	1	1	1	1	2
167	3	1	2	2	3	1	1	2	2	2	1	0	1	1
168	3	1	2	2	3	1	1	2	1	2	1	0	1	1
169	2	1	1	0	1	1	1	3	1	3	2	0	1	0
170	3	1	2	3	3	1	1	2	2	1	1	2	1	1
171	3	1	1	3	2	1	1	2	2	2	2	1	1	1
172	3	1	1	3	2	2	1	2	2	2	2	2	1	1
173	2	2	1	2	2	1	1	2	1	1	1	1	1	1
174	3	1	1	3	1	1	1	1	1	1	1	1	1	1
175	0	0	0	1	0	0	0	0	0	0	0	3	1	1
176	0	0	0	3	0	0	0	0	0	0	0	2	1	1
177	3	1	1	3	2	1	2	2	1	1	1	1	1	0
178	2	1	1	3	2	1	1	2	2	1	2	1	2	2
179	3	2	2	3	2	1	1	2	2	2	2	1	1	1
180	3	1	1	3	2	2	1	3	1	3	1	1	1	1
181	3	2	2	2	2	2	1	1	1	2	2	1	1	1
182	3	2	2	3	1	1	2	1	1	2	2	2	1	1
183	3	1	2	2	2	2	1	1	2	2	2	1	2	1
184	2	2	0	2	2	2	1	1	2	1	3	2	2	2
185	3	1	2	2	2	1	1	4	2	1	1	1	1	1
186	2	1	2	2	2	1	1	4	1	2	2	1	1	1
187	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	3	1	2	3	3	2	1	1	1	1	1	1	1	2
189	3	1	1	3	3	1	1	3	1	1	1	1	1	1

C1	C126	C127	C128	C129	C130	C131	C132	C133
1	2	2	3	4	4	0	0	2
2	1	1	1	5	4	0	0	2
3	1	1	1	3	4	0	0	1
4	1	1	2	5	4	0	0	3
5	1	1	1	3	4	0	0	2
6	1	1	1	2	3	0	0	3
7	1	1	1	3	4	0	0	1
8	0	0	0	5	2	0	0	2
9	2	1	1	4	4	0	0	2
10	0	0	0	1	2	0	0	2
11	1	1	1	0	3	0	0	2
12	1	1	1	0	3	0	0	3
13	2	2	2	5	2	0	0	2
14	2	2	2	5	3	0	0	3
15	1	1	1	2	2	0	0	2
16	1	1	0	5	4	2	0	2
17	1	1	1	4	4	0	2	3
18	0	0	0	3	1	0	2	2
19	2	1	2	5	3	2	0	3
20	1	1	1	0	1	0	0	3
21	0	0	0	3	1	0	0	2
22	1	1	1	5	3	0	0	3
23	0	0	0	4	1	0	0	3
24	0	0	0	5	4	0	0	3
25	1	1	1	0	3	0	0	3
26	1	1	1	5	4	0	0	3
27	2	1	1	5	2	0	0	3
28	0	0	0	3	1	0	0	3
29	1	1	1	5	3	2	0	3
30	0	0	0	5	2	2	0	3
31	1	1	1	0	2	0	2	2
32	1	1	1	5	4	0	2	3
33	3	1	1	5	4	0	2	3
34	1	1	1	5	2	0	0	2
35	3	3	3	5	4	0	0	2
36	3	3	2	5	2	0	0	2
37	1	1	0	5	4	0	0	3
38	2	1	0	5	2	0	0	3
39	2	1	2	5	4	0	0	3
40	1	1	1	3	2	0	0	2
41	1	1	1	5	2	0	0	3
42	0	0	0	5	2	2	0	3
43	1	1	1	5	3	0	2	3
44	2	2	2	3	4	0	2	1
45	2	1	1	5	2	0	2	2
46	1	2	1	3	3	0	2	2
47	0	0	0	2	4	0	2	2
48	1	2	2	4	4	2	0	3
49	1	1	1	2	1	2	0	3
50	1	1	1	5	2	0	2	2
51	0	0	0	2	2	2	0	3

C1	C126	C127	C128	C129	C130	C131	C132	C133
52	1	1	1	3	4	2	0	2
53	1	1	1	1	2	2	0	2
54	2	1	2	5	2	2	0	2
55	1	1	1	2	2	2	0	3
56	2	1	1	0	4	2	0	3
57	1	1	1	5	2	2	0	3
58	1	1	1	5	3	2	0	3
59	1	1	1	5	4	0	0	2
60	1	1	1	2	3	0	0	2
61	1	1	1	1	4	0	0	2
62	2	1	1	4	3	0	0	1
63	1	1	1	3	3	0	0	1
64	1	1	1	3	3	0	0	1
65	1	1	1	3	4	0	0	3
66	1	1	1	5	4	0	0	1
67	1	1	1	3	4	0	0	2
68	0	0	0	4	1	0	0	2
69	0	0	0	1	2	0	0	2
70	1	1	1	1	2	0	0	2
71	1	1	1	5	2	0	0	3
72	1	1	1	3	4	0	0	2
73	0	0	0	0	2	0	0	2
74	2	1	1	1	3	0	1	1
75	1	1	1	1	4	0	1	1
76	1	1	0	3	4	0	1	1
77	1	1	0	2	4	0	1	3
78	1	1	1	5	3	0	0	2
79	1	1	1	2	2	0	0	2
80	0	0	0	5	4	0	0	2
81	2	2	2	5	4	0	0	3
82	1	1	1	5	1	0	0	3
83	2	1	1	5	1	0	0	3
84	2	2	1	3	2	0	0	3
85	1	1	1	3	2	0	0	1
86	2	2	2	5	2	0	0	2
87	1	1	1	3	3	0	0	3
88	2	1	0	4	3	0	0	2
89	1	1	1	1	2	0	0	2
90	0	0	0	3	1	0	0	2
91	0	0	0	5	1	0	0	3
92	1	1	1	4	3	0	0	2
93	1	1	1	2	4	0	0	2
94	1	1	1	4	4	0	0	2
95	1	0	0	2	2	0	0	2
96	1	1	1	3	4	0	0	2
97	1	1	1	0	2	0	0	3
98	0	0	0	3	2	0	0	2
99	1	1	1	2	4	0	0	2
100	0	0	0	4	1	0	0	2
101	3	3	1	5	2	0	0	3
102	0	0	0	5	1	0	0	3

C1	C126	C127	C128	C129	C130	C131	C132	C133
103	1	2	2	4	1	0	0	2
104	1	1	1	5	4	0	0	2
105	2	1	3	5	1	0	0	3
106	1	1	1	4	4	0	0	2
107	1	1	1	3	3	0	0	2
108	1	1	1	2	2	0	0	2
109	2	2	1	5	4	0	0	3
110	1	1	1	3	3	0	0	2
111	1	2	1	4	1	0	0	3
112	1	1	1	4	3	0	0	2
113	1	1	1	3	1	0	0	2
114	1	1	1	4	4	0	0	2
115	1	1	1	2	3	0	0	2
116	1	1	0	5	3	0	2	3
117	1	1	1	2	3	0	2	2
118	1	1	1	2	2	0	2	2
119	1	1	1	4	3	2	0	1
120	3	1	1	5	3	0	2	2
121	2	2	1	2	2	0	2	2
122	1	1	1	5	3	2	0	2
123	1	1	1	3	2	2	0	2
124	1	1	2	0	4	2	0	2
125	1	1	1	1	2	0	2	2
126	1	1	1	1	2	0	2	2
127	1	1	0	0	3	2	0	3
128	1	1	1	2	3	2	0	2
129	1	1	1	2	4	1	0	2
130	0	0	0	5	1	1	0	3
131	1	0	0	5	2	1	0	2
132	1	0	0	2	2	1	0	2
133	1	1	1	3	3	0	0	1
134	1	1	1	3	4	0	0	2
135	2	1	1	3	4	0	0	2
136	1	1	1	4	3	0	0	2
137	2	2	1	4	3	0	0	1
138	1	1	1	3	4	1	0	2
139	1	2	2	5	2	1	0	2
140	2	1	2	2	2	1	0	2
141	1	1	3	1	4	1	0	1
142	1	1	1	4	3	1	0	2
143	1	1	1	4	4	1	0	2
144	3	1	3	0	4	1	0	2
145	1	1	1	1	1	1	0	1
146	1	1	0	2	2	0	0	1
147	0	0	0	3	1	0	0	2
148	1	1	1	2	2	1	0	2
149	1	1	1	3	4	1	0	2
150	2	1	2	4	2	1	0	1
151	1	1	1	4	4	1	0	2
152	1	1	1	2	3	0	0	1
153	1	1	1	2	3	0	0	2

C1	C126	C127	C128	C129	C130	C131	C132	C133
154	1	2	2	3	3	0	0	2
155	1	1	1	5	3	0	0	3
156	1	1	1	5	4	0	2	2
157	0	0	0	0	3	2	0	3
158	3	2	2	5	3	2	0	2
159	1	1	0	5	2	2	0	3
160	1	1	1	5	3	0	2	3
161	1	1	2	2	4	2	0	2
162	1	1	1	1	3	0	1	2
163	0	0	0	1	1	0	1	1
164	1	1	1	1	4	0	1	2
165	1	1	1	1	4	1	0	1
166	1	1	1	4	4	1	0	3
167	1	1	1	2	4	1	0	2
168	1	1	1	1	3	0	1	2
169	0	0	0	5	1	0	1	3
170	1	1	1	5	4	0	1	2
171	1	2	1	4	4	0	0	2
172	1	1	1	3	4	0	1	3
173	1	1	1	4	3	0	1	1
174	1	1	1	1	4	1	0	1
175	1	1	0	2	4	1	0	1
176	1	1	0	3	4	0	1	1
177	0	0	0	2	3	1	0	3
178	1	1	2	4	4	1	0	3
179	1	1	1	1	4	0	1	2
180	2	1	1	3	3	0	1	2
181	1	2	2	5	4	0	1	3
182	1	1	1	3	4	1	0	3
183	2	1	1	5	2	0	1	2
184	2	3	2	2	4	0	1	2
185	2	1	1	4	2	1	0	2
186	1	1	1	4	3	0	1	1
187	0	0	0	1	1	0	1	2
188	2	1	1	0	4	0	0	1
189	1	1	1	2	4	0	0	1

APPENDIX C-2

CODED QUESTIONNAIRE DATA FROM THE SENIORS GAMES (1986)
VARIABLES: 1 - 133

1 Subject Number

2 Activity Group
- 1 - most active (male)
- 2 - least active (male)
- 3 - most active (female)
- 4 - least active (female)
- 5 - mid active (male)
- 6 - mid active (female)

3 Sex
- 1 - male
- 2 - female

4 Age Group
- 1 - male 50-59
- 2 - male 60-69
- 3 - male 70+
- 4 - female 50-59
- 5 - female 60-69
- 6 - female 70+

5 Age (years) xx.xx

6 Event

7 Height (cm) xxx.xx

8 Weight (kg) xxx.xx

9 Tricep Skinfold (skf)(mm) xx.xx

10 Bicep skf(mm) xx.xx

11 Subscapular skf(mm) xx.xx

12 Illiac Crest skf(mm) xx.xx

13 Abdominal skf(mm) xx.xx

14 Thigh skf(mm) xx.xx

15 Calf skf(mm) xx.xx

16 Sum of 5 skf(mm) xxx.xx

17 Biacromial Width (cm) xx.xx

18 Humeral Width (cm) xx.xx

19 Wrist Width (cm) xx.xx

20 Bicristal Width (cm) xx.xx

21 Femur Width (cm) xx.xx

22 Chest Girth (cm) xx.xx

23 Abdomen Girth(cm) xx.xx

24 Waist Girth(cm) xx.xx

25 Flexed Arm Girth(cm) xx.xx

26 Relaxed Arm Girth(cm) xx.xx

27 Forearm Girth(cm) xx.xx

28 Wrist Girth(cm) xx.xx

29 Thigh Girth(cm) xx.xx

30 Calf Girth(cm) xx.xx

31 Right Grip Strength (kg) xx.xx

32 Left Grip Strength (kg) xx.xx

33 Total Grip Strength (kg) xx.xx

34 Push Ups (maximum) xx.xx

35 Sit Ups (maximum) xx.xx

36 Flexibility (Sit and Reach) (cm) xx.xx

37 Pre Heartrate (beats per minute - bpm) xxx.xx

38 Final Heartrate (bpm) xxx.xx

39 Recovery Heartrate (bpm) xxx.xx

40 MVO_2 (ml/kg/) xx.xx

41 Height/Weight Ratio (cm/kg) xx.xx

42 Sum of 3 skf xxx.xx

43 Endomorphy Units (Carter) xx.xx

44 Mesomorphy (Carter) xx.xx

45 Ectomorphy (Carter) xx.xx

46 Body Density x.xx

47 Percent Body Fat xx.xx

48 Lean Body Mass (kg) xxx.xx

49 Sum of 6 skf (0 scale) xxx.xx

50 Adiposity on 0 scale x.xx

51 Proportional Weight x.xx

52 Ponderal Index (Height divided by the cubed root weight) xx.xx

53 Body Mass Index Weight/Height^2 (meters) xx.xx

54 Marital Status:
0 - No response
1 - Married
2 - Single
3 - Widowed
4 - Divorced/Separated

55 Living Arrangments:
0 - No response
1 - With spouse
2 - Alone
3 - Friend
4 - Children
5 - Other

56 Where do you live?:
0 - No reponse
1 - Big city
2 - Town
3 - Farm
4 - Rural Home

57 Type of accomodation:
0 - No response
1 - House
2 - Normal apartment
3 - Seniors residence
4 - Nursing home
5 - Trailer
6 - Other

58 Length of time for residency in Alberta:
0 - No response
1 - Less than 5yrs
2 - 5-10yrs
3 - 11-20yrs
4 - more than 20yrs
5 - entire lifetime

59 How many children do you have?: 0 - No response
1 - 0
2 - 1
3 - 2
4 - 3
5 - 4
6 - 5
7 - 6 or more

60 Is your mother alive?: 0 - No response
1 - Yes
2 - No

61 Is your father alive? 0 - No response
1 - Yes
2 - No

62 Educational training: 0 - No response
1 - Grade school 1
2 - 2
3 - 3
4 - 4
5 - 5
6 - 6
7 - 7
8 - 8
9 - 9
10 - 10
11 - 11
12 - 12
13 - 1 yr of vocational training
14 - 2 yrs "
15 - 3 yrs "
16 - 4 yrs "
17 - 5 yrs " or more
18 - 1 yr university undergraduate
19 - 2 yrs "
20 - 3 yrs "
21 - 4 yrs "
22 - 5 yrs " or more
23 - 1 yr university graduate
24 - 2 yrs "
25 - 3 yrs "
26 - 4 yrs "
27 - 5 yrs " or more

63 Main occupation - how long?:
0 - No response
1 - 1-9yrs
2 - 10-19yrs
3 - 20-29yrs
4 - 30-39yrs
5 - 40-49yrs
6 - 50 or more yrs

64 Retired from occupation?:
0 - No response
1 - Yes
2 - No

65 If retired, how long not working?:
0 - No response
1 - Not retired
2 - 1-5yrs
3 - 6-10yrs
4 - 11-15yrs
5 - more than 15yrs

66 Usual Activity Status:
0 - No response
1 - Sleeping, resting
2 - Mostly sitting/some standing activity - little walking
3 - Mostly standing with some walking and a few vigorous activities
4 - Mostly walking/standing requiring strength. Some vigorous activities/very little sitting
5 - Mostly walking and standing requiring much strength, endurance and employing many vigorous activities

67 Emotionally stressful life's work?:
0 - No response
1 - Frequently
2 - Occasionally
3 - Rarely
4 - Never

68 Is your drivers license current?:
0 - No response
1 - Yes
2 - No

69 Frequency of doctor visits:
0 - No response
1 - Every few years
2 - Once a year
3 - Twice a year
4 - More than twice a year

70 Teeth satisfactory for chewing(for fresh fruits, vegetables, meats):
0 - No response
1 - Yes
2 - No

71 Do you wear dentures?:
0 - No response
1 - Yes
2 - Partial Dentures
3 - No

72 Rating of general health:
0 - No response
1 - Excellent
2 - Good
3 - Fair
4 - Poor

73 On a regular basis, how many different medications are taken?
prescription:
0 - No response
99 - None
1> - Number corresponds to answer

74 non-prescription:
0 - No response
99 - None
1> - Number corresponds to answer

75 Description of vision:
0 - No response
1 - Good with no glasses
2 - Glasses for reading
3 - Bi/Trifocal glasses
4 - Poor with glasses
5 - Partially blind

76 Description of hearing:
0 - No response
1 - Good with no aid
2 - Some hearing loss/no aid
3 - Hearing aid
4 - Poor hearing even with aid

77 Sleep habits:
0 - No response
1 - Solid 6-8 hours
2 - Occasional wakefulness
3 - Restlessness

78 Smoking?:
0 - No response
1 - Not a smoker
2 - Yes, a smoker

79 Number of cigarettes:
- 0 - No response
- 1 - No/none
- 2 - A few cigarettes daily
- 3 - Half a pack/day
- 4 - Full pack/day
- 5 - More than a pack/day

80 Cigars/Cigarillos, how many per day?:
- 0 - No response
- 99 - None
- 98 - Do not smoke
- 1> - Corresponds to actual number

81 Pipe use, how many times per day?:
- 0 - No response
- 99 - None
- 98 - Do not smoke
- 1> - Corresponds to actual number

82 If you have now stopped, how many years did you smoke for?:
- 0 - No response
- 1 - No
- 2 - 1-10 years
- 3 - 10-20 years
- 4 - 20-30 years
- 5 - 30-40 years
- 6 - 40-50 years

83 Do you drink alcohol?:
- 0 - No response
- 1 - Never
- 2 - 1-3 times a month
- 3 - 1-3 times a week
- 4 - 4-7 times a week
- 5 - More than once a day

84 Do you normally wear seatbelts in a car?:
- 0 - No response
- 1 - Yes
- 2 - No

85 What do you feel about your weight?:
- 0 - No response
- 1 - Too heavy (15 or more lbs. over)
- 2 - A bit overweight (5-15 lbs. over)
- 3 - Just right (within 5 lbs. of ideal)
- 4 - Need to gain weight (5-15lbs. under)

86 Do you do vigorous exercises for 15 to 30 minutes at least three times per week? (ex. continuous swimming, brisk walking, jogging or dancing):

0 - No response
1 - Yes
2 - I do some activity, but not this much
3 - No

87 Do you do casual or quieter activities several times per week that probably enhance your fitness? (examples include yoga, gardening, leisurely walks, mild exercises):

0 - No response
1 - Yes
2 - Occasionally
3 - No

88 Do you look for ways to build fitness activities into your life? (Ex. Walk to work or the store, take stairs instead of an elevator):

0 - No response
1 - Yes
2 - Occasionally
3 - No

89 Do you believe exercise is important to your health?:

0 - No response
1 - Yes
2 - Somewhat
3 - No

90 Comparing yourself to others of your own age, would you say that you are...

0 - No response
1 - More fit
2 - As fit
3 - Less fit

91 Have you ever participated in the Alberta Seniors Games?:

0 - No response
1 - Yes
2 - No

92 Have you ever participated in ANY major Sport Games or Championships?:

0 - No response
1 - Yes
2 - No

93 You participated in sport in your youth...
0 - No response
1 - Intensively
2 - Frequently
3 - Rarely
4 - No

94 You have been in good physical shape...
0 - No response
1 - Most of my life
2 - Part of my life
3 - Occasionally
4 - Rarely

9' How many meals do you eat each day?:
0 - No response
1 - 1
2 - 2
3 - 3
4 - 4
5 - 5

96 Do you eat snacks as a part of your normal diet?:
0 - No response
1 - No
2 - Once a day
3 - Twice a day
4 - More than twice a day

97 What do you consume for your usual morning meal?:
0 - No response
1 - No morning meal
2 - Drinks only
3 - Drinks and solid food (Breakfast)

98 Do you eat whole grain cereals and a high fibre diet?:
0 - No response
1 - Yes
2 - No

99 Do you use salt in you diet?:
0 - No response
1 - Yes, liberally
2 - I use salt substitute
3 - I use salt in moderation
4 - Very limited

100 Do you eat the fatty portions of meat and poultry?:
0 - No response
1 - Yes
2 - No

101 Do you normally have fried or deep fried foods?:
0 - No response
1 - Two or more a day
2 - Once a day
3 - 4-7 times a week
4 - 1-3 times a week
5 - Rarely

102 Do you normally have a sweet dessert?:
0 - No response
1 - Two or more a day
2 - Once a day
3 - 4-7 times a week
4 - 1-3 times a week
5 - Rarely

103 When you add sweetness, do you use..
0 - No response
1 - Sugar
2 - Honey
3 - Artificial sweetner

104 Do you consider yourself to have a sound and nutritious diet?:
0 - No response
1 - Always
2 - Most of the time
3 - Some of the time
4 - Rarely

105 Do you appreciate the body you have and try to take care of it?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

106 Do you feel energetic.....
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

107 Do you feel financially secure?:
0 - No response
1 - Yes
2 - Partially
3 - No

108 Has life been good to you?:
0 - No response
1 - Yes
2 - Partially
3 - No

109 Are you goals for the future clear?:
0 - No response
1 - Yes
2 - Partially
3 - No

110 Do you have holidays or special event in the near future that you are looking forward to?:
0 - No response
1 - Yes
2 - Partially
3 - No

111 Do you currently feel wanted and useful?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

112 Is loneliness a problem for you?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

113 Does your family give you emotional support?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

114 Do your friends give you emotional support?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

115 Do you feel sorry for yourself?:
0 - No response
1 - Often
2 - Occasionally
3 - Rarely

116 Please describe your temperment?:
0 - No response
1 - Always even tempered
2 - Usually even tempered
3 - Somewhat short tempered
4 - Very short tempered

117 Do you cope with the stresses of aging well?:
0 - No response
1 - Yes
2 - Partially
3 - No

118 Are you planning any new projects/activities/trips?:
0 - No response
1 - Yes
2 - Partially
3 - No

119 How much TV do you watch per day?:
0 - No response
1 - 1 hour or less
2 - 1-2 hours
3 - 2-4 hours
4 - More than 4 hours

120 How much reading do you do each day?:
0 - No response
1 - 1 hours or less
2 - 1-2 hours
3 - 2-4 hours
4 - more than 4 hours

121 Do you feel your memory of past events is good?:
0 - No response
1 - Yes
2 - Partially
3 - No

122 Do you feel your memory of recent events is good?:
0 - No response
1 - Yes
2 - Partially
3 - No

123 Are you looking forward to the future?:
0 - No response
1 - Yes
2 - Partially
3 - No

124 Are you satisfied with your current lifest ?:
..Socially 0 - No response
1 - Most of the time
2 - Some of the time
3 - Rarely

125 ..Emotionally 0 - No response
1 - Most of the time
2 - Some of the time
3 - Rarely

126 ..Physically 0 - No response
1 - Most of the time
2 - Some of the time
3 - Rarely

127 ..Mentally 0 - No response
1 - Most of the time
2 - Some of the time
3 - Rarely

128 ..Spiritually 0 - No response
1 - Most of the time
2 - Some of the time
3 - Rarely

129 Normative data for heartrate final scores done with the Step Test:
0 - No score
1 - Excellent
2 - Above Average
3 - Average
4 - Below Average
5 - Poor

130 Education (#62) broken down into:
1 - Grades 0-6
2 - Grades 7-9
3 - Grades 10-12
4 - Post Secondary
Formula: #130=(#62>=0)+(#62>6)+(#62>9)+(#62>12)

131 Males Activity group:
0 - Everyone else
1 - Males most active
2 - Males least active
Formula: #131=(#2<2)+(#2=2)

132 Females Activity group:
0 - Everyone else
1 - Females most active
2 - Females least active
Formula: #132=(#2=3)+(#2=4)+(#2=4)

133 Age groups regardless of sex:
1 - 50-59
2 - 60-69
3 - 70+

APPENDIX D

EXTRAPOLATED HEARTRATE SCORES (bpm) AND FITNESS CATEGORIES FOR THE 70+ AGE GROUP

FITNESS	CATEGORY	MALES (bpm)	FEMALES (bpm)
1	Excellent	<=91	<=106
2	Above Average	92-101	107-117
3	Average	102-106	118-128
4	Below Average	107-114	129-134
5	Poor	115-142 >= 131*	135-158 >= 131*

* Use this heartrate value if the subject only completed one (of the maximum of two) stepping stages during the step test.