Scoring is accomplished by adding a weighted sum of the number of months for each activity below and again above the hours per week cutpoint. Algebraically, where \( m \) is the number of months below the cutpoint and \( n \) is the number of months above the cutpoint, and the coefficients \( b \) and \( c \) are described below. The coefficient \( c \) has been selected to be \( 3*b \) for each activity.

\[
\text{Heavy intensity score} = \sum b_i \times m_i + c_i \times n_i \\
\text{for activities A-H}
\]

Moderate intensity score is similar in form, but summed over activities I through M, and the total score is the sum of the two subscores.

The coefficient \( b \) is the intensity level assigned to each activity which is roughly the number of kilocalories thought to be expended in one minute of activity by a 70 kg man. Intensities were patterned after those used by Taylor et al and Folsom et al. Exceptions are bicycling, which was set at an intensity code of 6 to reflect the wording "faster than 10 miles per hour" and vigorous work activity (which was not included in Taylor's or Folsom's work), which was set at an intensity code of 5, somewhat less than that for weight lifting.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Intensity (b) (kcal per minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Jog or run</td>
<td>8</td>
</tr>
<tr>
<td>B. Vigorous racket sports</td>
<td>8</td>
</tr>
<tr>
<td>C. Bicycle faster than 10 miles per hour</td>
<td>6</td>
</tr>
<tr>
<td>D. Swimming</td>
<td>6</td>
</tr>
<tr>
<td>E. Vigorous exercise class or vigorous dancing</td>
<td>6</td>
</tr>
</tbody>
</table>
F. Non-work activity such as shoveling, weight-lifting and moving heavy objects

G. Vigorous work activity such as lifting, carrying or digging

H. Other strenuous sports such as basketball, football, skating, skiing

I. Other non-strenuous sports such as softball, shooting baskets, volleyball, ping-pong

J. Take walks or hikes or walk to work

K. Bowling or golf

L. Home exercises, calisthenics

M. Home maintenance and gardening, including carpentry, painting, raking, mowing

The above equation can also be expressed as: \( \Sigma b_i \times (P_{2i} + 2 \times P_{3i}) \)

where \( b_i \) is the same as above
and \( P_{2i} \) = response to Part 2 of the exercise question
\( P_{3i} \) = response to Part 3 of the exercise question

e.g. for (A) jogging \( P_{2i} = A_2 = \# \) of months doing activity
\( P_{3i} = A_3 = \# \) of months above cutpoint
thus, Heavy Intensity Score = \( \Sigma b_i \times (P_{2i} + 2 \times P_{3i}) \)  \( i = A-H \)

Moderate Intensity Score = \( \Sigma b_i \times (P_{2i} + 2 \times P_{3i}) \)  \( i = I-M \)

Total Intensity Score = Heavy intensity score + moderate intensity score
OPTIONS PAGESIZE=59;
LIBNAME HISTORY 'D:\UMASAS';

DATA TEMP;
  INFILE 'E:\V2\FORM18.SEQ' LRECL=115;
  LENGTH ID 8 DEFAULT=3;
  MISSING M;
  INPUT CENTER 1 ID 1-12
    B18PSTYR  44
    B18A1RUN  45  B18A2MO  46-47  B18A3PWK  48-49
    B18B1RAC  50  B18B2MO  51-52  B18B3PWK  53-54
    B18C1BKE  55  B18C2MO  56-57  B18C3PWK  58-59
    B18D1SWM  60  B18D2MO  61-62  B18D3PWK  63-64
    B18E1DNC  65  B18E2MO  66-67  B18E3PWK  68-69
    B18F1LFT  70  B18F2MO  71-72  B18F3PWK  73-74
    B18G1SHV  75  B18G2MO  76-77  B18G3PWK  78-79
    B18H1HSP  80  B18H2MO  81-82  B18H3PWK  83-84
    B18I1LSP  85  B18I2MO  86-87  B18I3PWK  88-89
    B18J1WLK  90  B18J2MO  91-92  B18J3PWK  93-94
    B18K1BWL  95  B18K2MO  96-97  B18K3PWK  98-99
    B18L1HMX 100  B18L2MO 101-102  B18L3PWK 103-104
    B18M1MNT 105  B18M2MO 106-107  B18M3PWK 108-109
    B18IVID  110-112;

* THE FOLLOWING STATEMENTS COMPUTE THE HEAVY, MODERATE, AND TOTAL *
* INTENSITY SCORE. IE A1HEAVY, A1MODER, AND A1TOTAL.            *
* THESE COMPUTATION ARE BASED ON THE MODIFICATIONS TO THE ORIGINAL *
* SCORING SYSTEM. REFERENCE ... JACOBS, D. RELIABILITY OF A SHORT *
* PHYSICAL ACTIVITY HISTORY. JUNE 1987                            *
*                                                  *
* EXAM 2: COEFFICIENT OF 'K1SCORE' CHANGED TO '3' FROM '2'. LEW.   *
*********************************************************************

IF B18A1RUN NE 1 THEN A1SCORE=8*(B18A2MO+2*B18A3PWK);
   ELSE A1SCORE=0;
IF B18B1RAC NE 1 THEN B1SCORE=8*(B18B2MO+2*B18B3PWK);
   ELSE B1SCORE=0;
IF B18C1BKE NE 1 THEN C1SCORE=6*(B18C2MO+2*B18C3PWK);
   ELSE C1SCORE=0;
IF B18D1SWM NE 1 THEN D1SCORE=6*(B18D2MO+2*B18D3PWK);
   ELSE D1SCORE=0;
IF B18E1DNC NE 1 THEN E1SCORE=6*(B18E2MO+2*B18E3PWK);
   ELSE E1SCORE=0;
IF B18F1LFT NE 1 THEN F1SCORE=6*(B18F2MO+2*B18F3PWK);
   ELSE F1SCORE=0;
IF B18G1SHV NE 1 THEN G1SCORE=5*(B18G2MO+2*B18G3PWK);
ELSE G1SCORE=0;
IF B18H1HSP NE 1 THEN H1SCORE=8*(B18H2MO+2*B18H3PWK);
ELSE H1SCORE=0;
IF B18I1LSP NE 1 THEN I1SCORE=4*(B18I2MO+2*B18I3PWK);
ELSE I1SCORE=0;
IF B18J1WLK NE 1 THEN J1SCORE=4*(B18J2MO+2*B18J3PWK);
ELSE J1SCORE=0;
IF B18K1BWL NE 1 THEN K1SCORE=3*(B18K2MO+2*B18K3PWK);
ELSE K1SCORE=0;
IF B18L1HMX NE 1 THEN L1SCORE=4*(B18L2MO+2*B18L3PWK);
ELSE L1SCORE=0;
IF B18M1MNT NE 1 THEN M1SCORE=4*(B18M2MO+2*B18M3PWK);
ELSE M1SCORE=0;

B18HEAVY=SUM(A1SCORE,B1SCORE,C1SCORE,D1SCORE,E1SCORE,F1SCORE,G1SCORE,H1SCORE);
B18MODER=SUM(I1SCORE,J1SCORE,K1SCORE,L1SCORE,M1SCORE);
B18TOTAL=SUM(B18HEAVY,B18MODER);

LABEL B18PSTYR = 'PHYSICAL ACTIVITY PAST YEAR'
B18A1RUN = 'RUN OR JOG PAST YEAR, 1 HR/MO'
B18A2MO = 'MO DID THIS ACTIVITY (JOG/B18A1RUN)'  
B18A3PWK = 'MO DID (JOG/B18A1RUN), 2 HR/WK'
B18B1RAC = 'VIGOROUS RACKET ACT, 2 HR TOTAL/12 MO'
B18B2MO = 'MO DID THIS ACT (RACKET/B18B1RAC)'
B18B3PWK = 'MO DID THIS ACT (B18B1RAC), 3 HR/WK'
B18C1BKE = 'BICYCLE FASTER THAN 10/MPH/PAST 12 MO'
B18C2MO = 'MO DID THIS ACT (BIKE/B18C1BKE)'
B18C3PWK = 'MO DID ACT (BIKE/B18C1BKE), 2 HR/WK'
B18D1SWM = 'SWIM PAST YEAR, 1 HR TOTAL TIME'
B18D2MO = 'MO DID THIS ACTIVITY (SWIM/B18D1SWM)'
B18D3PWK = 'MO DID ACT (SWIM/B18D1SWM), 2 HR/WK'
B18E1DNC = 'DANCE PAST YEAR, 1 HR TOTAL TIME'
B18E2MO = 'MO DID ACT (DANCE/B18E1DNC)'
B18E3PWK = 'MO DID ACT (DANCE/B18E1DNC), 3 HR/WK'
B18F1LFT = 'LIFTING, CARRYING, DIGGING PAST YEAR'
B18F2MO = 'MO DID ACT (LIFTING/CARRY/DIGGING)'
B18F3PWK = 'MONTHS DID ACT(LIFT,CARRY,DIG), 5 HR/WK'
B18G1SHV = 'ACTIVITIES(SHOVEL SNOW) PAST YR'
B18G2MO = 'MO DID ACTIVITY (B18G1SHV)'
B18G3PWK = 'MO DID (B18G1SHV), 3 HR/WK'
B18H1HSP = 'STRENuous SPORTS PAST YEAR'
B18H2MO = 'MO DID ACTIVITY (B18H1HSP)'
B18H3PWK = 'MONTHS DID (B18H1HSP) 3HRS/WK'
B18I1LSP = 'SOFTBALL, ETC 1 HR/12 MO'
B18I2MO = 'MO DID ACTIVITY (B18I1LSP)'
B18I3PWK = 'MO DID (B18I1LSP), 3HR/WK'
B18J1WLK = 'WALK, HIKE, WALK TO WORK,1 HR/12 MO'
B18J2MO = 'MO DID ACTIVITY (WALK/B18J1WLK)'
B18J3PWK = 'MO DID (WALK/B18J1WLK), 4 HR/WK'
B18K1BWL = 'BOWL OR PLAY GOLF,1 HR/12 MO'
B18K2MO = 'MO DID ACTIVITY (GOLF/B18K1BWL)'
B18K3PWK = 'MO DID (GOLF/B18K1BWL), 3HR/WK'
B18L1HMX = 'HOME EXERCISE, 1 HR TOTAL TIME/ 12 MO'
B18L2MO = 'MO DID ACTIVITY (H.EXERCISE/B18L1HMX)'
B18L3PWK = 'MO DID (H.EXERCISE/B18L1HMX), 3HR/WK'
B18M1MNT = 'H.MAINTENANCE, 1 HR T. TM/12 MO'
B18M2MO = 'MO DID ACTIVITY (H.MAINTANCE/B18M1MNT)'
B18M3PWK = 'MO DID (H.MAINTANCE/B18M1MNT), 5 HR/WK'
B18IVID = 'INTERVIEWER ID, FORM 18'
B18HEAVY = 'HEAVY INTENSITY SCORE'
B18MODER = 'MODERATE INTENSITY SCORE'
B18TOTAL = 'TOTAL INTENSITY SCORE';

DROP A1SCORE B1SCORE C1SCORE D1SCORE E1SCORE F1SCORE G1SCORE H1SCORE I1SCORE J1SCORE K1SCORE L1SCORE M1SCORE;

RUN;

PROC SORT DATA=TEMP;
   BY ID;
RUN;

DATA HISTORY.B2F18;
   MERGE TEMP HISTORY.ID (IN=IN_ID);
      BY ID;
      IF IN_ID;
RUN;

PROC CONTENTS;
TITLE1 'CONTENTS OF EXAM 2 V.2 FILE FOR ';
TITLE2 'FORM 18';
RUN;
### CONTENTS OF EXAM 2 V.2 FILE FOR FORM 18

Data Set Name: HISTORY.B2F18
Observations: 4624
Variables: 46
Label:

#### Alphabetic List of Variables and Attributes

<table>
<thead>
<tr>
<th>#</th>
<th>Variable</th>
<th>Type</th>
<th>Len</th>
<th>Pos</th>
<th>Label</th>
</tr>
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<tbody>
<tr>
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<td>B18A1RUN</td>
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<td>18</td>
<td>RUN OR JOG PAST YEAR, 1 HR/MO</td>
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<td>MO DID THIS ACTIVITY (JOG/B18A1RUN)</td>
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<td>VIGOROUS RACKET ACT, 2 HR TOTAL/12 MO</td>
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<td>BICYCLE FASTER THAN 10 MPH/PAST 12 MO</td>
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<td>MO DID THIS ACT (BIKE/B18C1BKE), 2 HR/ WK</td>
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<td>SWIM PAST YEAR, 1 HR TOTAL TIME</td>
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<td>MONTHS DID (B18H1HSP) 3 HRS/WK</td>
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<td>B18HEAVY</td>
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<td>HEAVY INTENSITY SCORE</td>
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<td>B18I1LSP</td>
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