STAT 480: Homework 10

Name: Kyle Salitrik | ***ID#:*** *997543474* | ***PSU ID:*** *kps168*

November 11, 2018

PROBLEM 1

Below is the report for problem 1:

ICDB Study Pain Score

Gender	Household Income GT $30,000	LT $30,000	Pain Score
Female	413	168	5.053
Male	42	14	4.714

PROBLEM 2

Below is the report for problem 2:

National Parks

Region	Museums	Camping	Facilities
East	10	12	22
West	23	38	61

SAS Code

```
1  /*******************************************************
2  Kyle Salitrik
3  kps168
4  PSU ID: 997543474
5  November 11, 2018
6
7  This program covers Homework 10 for STAT 480.
8  *******************************************************/
9
10 LIBNAME STAT480 'C:\STAT480\';
11
12 * Create formats for data;
13 PROC FORMAT;
14     * Create value format for country;
15     VALUE sexFmt 1 = 'Male'
16                  2 = 'Female';
17     VALUE incomeFmt 1 = 'LT $30,000'
18                     2 = 'GT $30,000';
19 RUN;
20
21 DATA painTemp;
22     * Load in dataset for problem 1;
23     SET STAT480.analysis;
24     KEEP subj sex income purg_1;
25 RUN;
26
27 PROC REPORT DATA=painTemp NOWINDOWS HEADLINE;
28     * Suppress date and output number;
29     OPTIONS NODATE NONUMBER;
30
31     * Create report for problem 1;
32     title 'ICDB Study Pain Score';
33
34     * Select columns to print out;
35     column sex income purg_1;
36
37     * Define sex output and group by gender;
38     define sex / group 'Gender' format=sexFmt.;
39
40     * Define income formatting and output;
41     define income / across 'Household Income' format=incomeFmt.;
42
43     * Calculate average and define output format for pain scores;
44     define purg_1 / mean format = 5.4 'Pain/Score';
45 RUN;
46
47 DATA parkTemp;
48     * Load in dataset for problem 2;
49     INFILE 'C:\STAT480\natparks.dat';
50     INPUT parkName $ 1-21 type $ region $ museums camping;
51
52 RUN;
53
54 PROC REPORT DATA=parkTemp NOWINDOWS HEADSKIP;
55     * Print report for problem 2;
56     title 'National Parks';
57
58     * Set wanted columns;
59     column region museums camping facilities;
60     define Region / group 'Region';
61
62     * Set format for museums and camping to center properly;
63     define Museums / 'Museums' format = 2.0 center width = 7;
64     define Camping / 'Camping' format = 2.0 center width = 7;
```

```
65
66      * Define facilities computation and format;
67      define facilities / computed 'Facilities' format = 2.0 center width = 10;
68      compute facilities;
69          facilities = museums.sum + camping.sum;
70      endcomp;
71 RUN;
```

SAS Log File

```
1  1     /********************************************************
2  2      Kyle  Salitrik
3  3      kps168
4  4      PSU ID:  997543474
5  5      November  11,  2018
6  6
7  7      This  program  covers  Homework  10  for  STAT  480.
8  8      ********************************************************/
9  9
10  10    LIBNAME STAT480  'C:\STAT480\';
11 NOTE:  Libref  STAT480  was  successfully  assigned  as  follows:
12         Engine:         V9
13         Physical  Name: C:\STAT480
14  11
15  12    * Create  formats  for  data;
16  13    PROC FORMAT;
17  14        * Create  value  format  for  country;
18  15        VALUE sexFmt  1 = 'Male'
19  16                     2 = 'Female';
20 NOTE: Format  SEXFMT  has  been  output.
21  17        VALUE incomeFmt  1 = 'LT $30,000'
22  18                         2 = 'GT $30,000';
23 NOTE: Format  INCOMEFMT  has  been  output.
24  19    RUN;
25
26 NOTE: PROCEDURE FORMAT used (Total process time):
27         real  time            0.03  seconds
28         cpu  time             0.01  seconds
29
30
31  20
32  21    DATA painTemp;
33  22        * Load  in  dataset  for  problem  1;
34  23        SET STAT480.analysis;
35  24        KEEP subj  sex  income  purg_1;
36  25    RUN;
37
38 NOTE: There  were  638  observations  read  from  the  data  set  STAT480.ANALYSIS.
39 NOTE: The  data  set  WORK.PAINTEMP  has  638  observations  and  4  variables.
40 NOTE: DATA statement used (Total process time):
41         real  time            0.02  seconds
42         cpu  time             0.01  seconds
43
44
45  26
46  27    PROC REPORT DATA=painTemp NOWINDOWS HEADLINE;
47  28        * Suppress  date  and  output  number;
48  29        OPTIONS NODATE NONUMBER;
49  30
50  31        * Create  report  for  problem  1;
51  32        title  'ICDB Study Pain Score';
52  33
53  34        * Select  columns  to  print  out;
54  35        column sex  income  purg_1;
55  36
56  37        * Define  sex  output  and  group  by  gender;
57  38        define sex  /  group  'Gender'  format=sexFmt.;
58  39
59  40        * Define  income  formatting  and  output;
60  41        define income  /  across  'Household Income'  format=incomeFmt.;
61  42
62  43        * Calculate  average  and  define  output  format  for  pain  scores;
63  44        define purg_1  /  mean  format = 5.4  'Pain/Score';
64  45    RUN;
```

```
65
66  NOTE: There were 638 observations read from the data set WORK.PAINTEMP.
67  NOTE: At least one W.D format was too small for the number to be printed. The decimal
        may be shifted
68      by the "BEST" format.
69  NOTE: PROCEDURE REPORT used (Total process time):
70      real time           0.06 seconds
71      cpu time            0.06 seconds
72
73
74  46
75  47   DATA parkTemp;
76  48       * Load in dataset for problem 2;
77  49       INFILE 'C:\STAT480\natparks.dat';
78  50       INPUT parkName $ 1-21 type $ region $ museums camping;
79  51
80  52   RUN;
81
82  NOTE: The infile 'C:\STAT480\natparks.dat' is:
83      Filename=C:\STAT480\natparks.dat,
84      RECFM=V,LRECL=32767,File Size (bytes)=394,
85      Last Modified=11Nov2018:18:28:29,
86      Create Time=11Nov2018:18:28:29
87
88  NOTE: 11 records were read from the infile 'C:\STAT480\natparks.dat'.
89      The minimum record length was 34.
90      The maximum record length was 34.
91  NOTE: The data set WORK.PARKTEMP has 11 observations and 5 variables.
92  NOTE: DATA statement used (Total process time):
93      real time           0.02 seconds
94      cpu time            0.03 seconds
95
96
97  53
98  54   PROC REPORT DATA=parkTemp NOWINDOWS HEADSKIP;
99  55       * Print report for problem 2;
100 56       title 'National Parks';
101 57
102 58       * Set wanted columns;
103 59       column region museums camping facilities;
104 60       define Region / group 'Region';
105 61
106 62       * Set format for museums and camping to center properly;
107 63       define Museums / 'Museums' format = 2.0 center width = 7;
108 64       define Camping / 'Camping' format = 2.0 center width = 7;
109 65
110 66       * Define facilities computation and format;
111 67       define facilities / computed 'Facilities' format = 2.0 center width = 10;
112 68       compute facilities;
113 69           facilities = museums.sum + camping.sum;
114 70       endcomp;
115 71   RUN;
116
117 NOTE: There were 11 observations read from the data set WORK.PARKTEMP.
118 NOTE: PROCEDURE REPORT used (Total process time):
119     real time           0.02 seconds
120     cpu time            0.03 seconds
```