STAT 480: Homework 8

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October 28, 2018

PROBLEM 1

Below is the output from my SAS code in text and an image format.

Sales Data

Obs	Date	Store	Avg Sales	Group	region
1	10/12/07	110	617.6	Average	South
2	10/12/07	111	670.8	Average	South
3	10/12/07	112	614.8	Average	North
4	10/12/07	113	655.8	Average	North
5	10/12/07	114	628.6	Average	North
6	17/12/07	110	748.8	Average	South
7	17/12/07	111	708.6	Average	South
8	17/12/07	112	792.6	High	North
9	17/12/07	113	745.2	Average	North
10	17/12/07	114	.	N/A	North
11	24/12/07	110	377.0	Low	South
12	24/12/07	111	775.2	High	South
13	24/12/07	112	598.8	Low	North
14	24/12/07	113	878.8	High	North
15	24/12/07	114	750.2	High	North
16	31/12/07	110	368.0	Low	South
17	31/12/07	111	562.6	Low	South
18	31/12/07	112	544.4	Low	North
19	31/12/07	113	639.8	Average	North
20	31/12/07	114	763.4	High	North

SAS CODE

```
 1 /*******************************************************
 2 Kyle Salitrik
 3 kps168
 4 PSU ID: 997543474
 5 Oct 28, 2018
 6
 7 This program covers Homework 8 for STAT 480.
 8 *******************************************************/
 9
10 DATA sales (DROP = Mon Tues Wed Thur Fri);
11     INPUT
12         @1 weekof ddmmyy8.
13         @10 Store 3.
14         @14 Mon 3.
15         @18 Tues 3.
16         @22 Wed 3.
17         @26 Thur 3.
18         @30 Fri 3.;
19
20     * Calculate average sales;
21     AvgSales = (Mon + Tues + Wed + Thur + Fri)/5;
22
23     * Set length of new group variable;
24     length Group $7;
25
26     * Determine whether sales are low, avg, high, or missing.;
27     if AvgSales = '.' then Group = 'N/A';
28     else if AvgSales LE 605 then Group = 'Low';
29     else if 605 LT AvgSales LE 750 then Group = 'Average';
30     else if AvgSales GT 750 then Group = 'High';
31
32     * Set region based on store number;
33     if (110 LE Store LE 111) then region = 'South';
34     else if 112 LE Store LE 114 then region = 'North';
35
36     DATALINES;
37 10/12/07 110 412 532 641 701 802
38 10/12/07 111 478 567 699 789 821
39 10/12/07 112 399 501 650 712 812
40 10/12/07 113 421 532 698 756 872
41 10/12/07 114 401 510 612 721 899
42 17/12/07 110 710 725 789 721 799
43 17/12/07 111 689 701 729 703 721
44 17/12/07 112 899 812 802 738 712
45 17/12/07 113 700 712 748 765 801
46 17/12/07 114 699 799 899 608 .
47 24/12/07 110 340 333 321 401 490
48 24/12/07 111 801 793 721 763 798
49 24/12/07 112 598 798 684 502 412
50 24/12/07 113 980 921 832 812 849
51 24/12/07 114 798 709 721 799 724
52 31/12/07 110 487 321 399 312 321
53 31/12/07 111 501 532 598 581 601
54 31/12/07 112 598 512 540 523 549
55 31/12/07 113 601 625 674 698 601
56 31/12/07 114 900 805 700 601 811
57     ;
58 RUN;
59
60 PROC PRINT data = sales label;
61     * Set page size to 50, line size to 80, and suppress date and number output;
62     OPTIONS PS = 58 LS = 80 NODATE NONUMBER;
63
64     * Set output title;
```

```
65    title "Sales Data";
66
67    *Set label and format of week output.;
68    label weekof = 'Date';
69    format weekof ddmmyy8.;
70 RUN;
```

SAS Log File

```
1  1    /*******************************************************
2  2    Kyle Salitrik
3  3    kps168
4  4    PSU ID: 997543474
5  5    Oct 28, 2018
6  6
7  7    This program covers Homework 8 for STAT 480.
8  8    *******************************************************/
9  9
10 10   DATA sales (DROP = Mon Tues Wed Thur Fri);
11 11       INPUT
12 12           @1 weekof ddmmyy8.
13 13           @10 Store 3.
14 14           @14 Mon 3.
15 15           @18 Tues 3.
16 16           @22 Wed 3.
17 17           @26 Thur 3.
18 18           @30 Fri 3.;
19 19
20 20       * Calculate average sales;
21 21       AvgSales = (Mon + Tues + Wed + Thur + Fri)/5;
22 22
23 23       * Set length of new group variable;
24 24       length Group $7;
25 25
26 26       * Determine whether sales are low, avg, high, or missing.;
27 27       if AvgSales = '.' then Group = 'N/A';
28 28       else if AvgSales LE 605 then Group = 'Low';
29 29       else if 605 LT AvgSales LE 750 then Group = 'Average';
30 30       else if AvgSales GT 750 then Group = 'High';
31 31
32 32       * Set region based on store number;
33 33       if (110 LE Store LE 111) then region = 'South';
34 34       else if 112 LE Store LE 114 then region = 'North';
35 35
36 36       DATALINES;
37
38 NOTE: Character values have been converted to numeric values at the places given by:
         (Line):(Column).
39        27:19
40 NOTE: Missing values were generated as a result of performing an operation on missing
         values.
41        Each place is given by: (Number of times) at (Line):(Column).
42        1 at 21:41
43 NOTE: The data set WORK.SALES has 20 observations and 5 variables.
44 NOTE: DATA statement used (Total process time):
45        real time            0.04 seconds
46        cpu time             0.03 seconds
47
48
49 57         ;
50 58    RUN;
51 59
52 60    PROC PRINT data = sales label;
53 61        * Set page size to 50, line size to 80, and suppress date and number output;
```

```
54 62          OPTIONS PS = 58 LS = 80 NODATE NONUMBER;
55 63
56 64          * Set output title;
57 65          title "Sales Data";
58 66
59 67          *Set label and format of week output.;
60 68          label weekof = 'Date';
61 69          format weekof ddmmyy8.;
62 70    RUN;
63
64 NOTE: There were 20 observations read from the data set WORK.SALES.
65 NOTE: PROCEDURE PRINT used (Total process time):
66       real time            0.03 seconds
67       cpu time             0.03 seconds
```