Creating Custom Formats Based on Nesting Formats

The **pg2.np_weather** table contains weather-related statistics for four national park locations. Create a format that, when applied, groups dates into identified categories.

1. Access the Base SAS® 9.4 Procedures Guide. Find the PROC FORMAT section and the VALUE statement page. Scroll to the bottom of the page to look at examples where existing SAS formats are used for labels in a custom format.

2. Open **p204p03.sas** from the **practices** folder. Modify the program.

    - Add a PROC FORMAT step to create a format named DECADE that categorizes dates as identified below.
        - Dates from January 1, 2000 – December 31, 2009 are displayed with the value *2000-2009*.
        - Dates from January 1, 2010 – December 31, 2017 are displayed with the value *2010-2017*.
        - Dates from January 1, 2018 – March 31, 2018 are displayed with the value *1st Quarter 2018*.
        - Dates from April 1, 2018, and beyond display the actual date value using the MMDDYY10. format.
    - Modify the PROC MEANS step so that the DECADE format is applied to the **Date** column.
    - Submit the program and examine the output. Verify that the descriptive values for the **Date** column are displayed.

```
proc format;
    value decade '01Jan2000'd-'31Dec2009'd = '2000-2009'
                 '01Jan2010'd-'31Dec2017'd = '2010-2017'
                 '01Jan2018'd-'31Mar2018'd = '1st Quarter 2018'
                 '01Apr2018'd-high = [mmddyy10.];
run;

title1 'Precipitation and Snowfall';
title2 'Note: Amounts shown in inches';
proc means data=pg2.np_weather maxdec=2 sum mean nonobs;
    where Prcp > 0 or Snow > 0;
    var Prcp Snow;
    class Date Name;
    format Date decade.;
run;
title;
```

3. Examine the PROC MEANS output. What was the sum and mean **Snowfall** in Moose, WY, from 2000-2009?

Sum: 1487.80
Mean: 1.24