Creating Projected Date Values

The **pg2.np_weather** table contains weather-related statistics for locations in four national parks. Determine the number of weeks between the first and last snowfall in each park for the 2015-2016 winter season.

1. Open the **p203p03.sas** program from the **practices** folder. The program contains a PROC SORT step that creates the **winter2015_2016** table. This table contains rows with dates with some snowfall between October 1, 2015, and June 1, 2016, sorted by **Code** and **Date**. Only the **Name**, **Code**, **Date**, and **Snow** columns are kept.

2. Modify the DATA step to create the **snowforecast** table based on the following specifications:

    - Process the data in groups by **Code**.
    - For the first row within each **Code** group, create a new column named **FirstSnow** that is the date of the first snowfall for that code.
    - For the last row within each **Code** group, do the following:
        - Create a new column named **LastSnow** that is the date of the last snowfall for that code.
        - Create a new column named **WinterLengthWeeks** that counts the number of full weeks between the **FirstSnow** and **LastSnow** dates.
        - Create a new column named **ProjectedFirstSnow** that is the same day of the first snowfall for the next year.
        - Output the row to the new table.
    - Be sure to retain the values of **FirstSnow** in the PDV so that they will be included with the rows that are in the output table.
    - Apply the DATE7. format to the **FirstSnow**, **LastSnow**, and **ProjectedFirstSnow** columns, and drop the **Date** and **Snow** columns.
    - Submit the program and examine the output data.

```
proc sort data=pg2.np_weather(keep=Name Code Date Snow)
          out=winter2015_2016;
    where date between '01Oct15'd and '01Jun16'd and Snow > 0;
    by Code Date;
run;

data snowforecast;
    set winter2015_2016;
    retain FirstSnow;
    by Code;
    if first.Code then FirstSnow=Date;
    if last.Code then do;
        LastSnow=Date;
        WinterLengthWeeks=intck('week', FirstSnow, LastSnow, 'c');
        ProjectedFirstSnow=intnx('year', FirstSnow, 1, 'same');
        output;
    end;
    format FirstSnow LastSnow ProjectedFirstSnow date7.;
    drop Snow Date;
run;
```

3. What is the value of **WinterLengthWeeks** in Moose, WY?

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