Chapter 2

# Try It Yourself: Create a Boolean Variable that Represents a Categorical Variable

## Excel Instructions

1. Open the vote.csv file in Excel.
2. Verify the age variable is in Column C and voted is in Column F.
3. Add a new column to create the drinking age variable:
   1. Right-click on Column D and choose Insert.
   2. Title the new blank Column D “drinking\_age”.
4. Use an IF statement to determine drinking age status:
   1. Use the following formula in Cell D2:   
      =IF(C2 >= 21, 1, 0)
   2. Drag this formula down to the end of the dataset to apply it to all rows.
5. Count the number of people of drinking age and below it:
   1. In an empty cell, count how many people are of drinking age:

=COUNTIF(D:D, 1)

* 1. In another cell, count how many people are not of drinking age:

=COUNTIF(D:D, 0)

1. Count the number of people of drinking age and below it who voted:
   1. In an empty cell, count how many people voted that are of drinking age: =COUNTIFS(G:G, 1, D:D, 1)
   2. In another cell, count how many people voted that are not of drinking age: =COUNTIFS(G:G, 1, D:D, 0)
2. Calculate voting percentages:
   1. In an empty cell, enter the following formula to find the percentage of people of drinking age who voted:

=COUNTIFS(G:G, 1, D:D, 1)/COUNTIF(D:D, 1)\*100

* 1. In another cell, enter the following formula to find the percentage of people not of drinking age who voted:

=COUNTIFS(G:G, 1, D:D, 0)/COUNTIF(D:D, 0)\*100