This activity is looking at what you may know about statistics from high school or other courses at college. If you don’t know the answer, that’s OK. If you don’t know it now, you’ll learn it during the semester.

1. The predicted high temperatures, in °F, for Ames for Jan 3 – 12, 2013 were:
   14, 28, 30, 22, 32, 34, 39, 36, 30, 26
   a) What is the mean, or average predicted high temperature for this period?

   b) What is the median predicted high temperature for this period?

   c) What is the range of the predicted high temperatures for this period?

   d) What is the standard deviation of the predicted high temperatures for this period?

2. Below is a histogram of the January average low temperature for 52 cities in the continental U.S.

   ![Histogram of Average Low Temperature](image)

   a) Describe the histogram and tell me what it indicates about the average low January temperature for cities in the U.S.

   b) Which will be greater the sample mean or sample median of the 52 average low January temperatures? Why?
3. Temperatures in the U.S. are reported in degrees Fahrenheit. Degrees Celsius are common in the rest of the world.

a) On the graph, plot the two points: 0 Celsius = 32 Fahrenheit
   100 Celsius = 212 Fahrenheit.
   Connect the two points with a straight line.
b) Calculate the slope of the straight line you drew in a).

c) What is the Y-intercept for the line you drew in a)?

d) Fill in the blanks to get the equation of the straight line that relates Celsius to Fahrenheit.
   \[ F = \underline{\quad} \cdot C + \underline{\quad} \]

e) What is the equation that relates Fahrenheit to Celsius?
   \[ C = \underline{\quad} \]