AGS 1   Name: _____ Per: _____

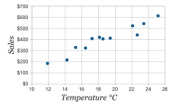## Unit 4b Review - Statistics

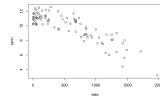Give the correlation direction and strength for each scatter plot.

1.   2.

Direction: Direction:

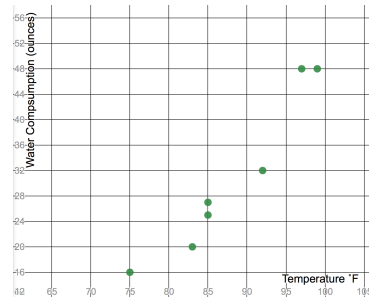Strength: Strength:

3.   Draw a scatter plot with a strong negative correlation.

4.   People were asked to record their water intake and the high temperature each day. A random sampling of the data they recorded is listed below. Using the given data and scatter plot. Find each piece of information.

Temp. °F	Water oz.
99°	48
85°	27
97°	48
75°	16
92°	32
85°	25
83°	20

Average Point:

Draw the line of best fit.

Equation:

Use the following data to answer #5-11.

Wave Height	3	6	5	1	4
Number of Surfers	24	61	56	15	35

5.   Make a scatter plot of the data.

6.   Consider the scatterplot and then describe the correlation.
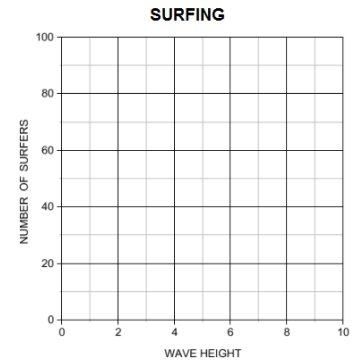
      Direction:

      Strength:

7.   Calculate the average point.

      $(\bar{x}, \bar{y})$:

8.   Draw the line of best fit and write the equation for it.

9.   Describe what the numbers in your equation mean in relation to the context of the problem.

10.   How many surfers do you think there will be if the wave height is 15 feet?

11.   What conclusion can you make about the relationship between wave height and the number of surfers on a given day?

Use the following data to answer #12 – 18.

Weight (thousands of pounds)	2.0	2.4	2.5	2.8	2.9	3.1	3.2	3.5	3.6	3.9
Mileage (miles per gallon)	34	34	28	23	25	23	23	22	24	18

12.   Make a scatterplot of the data.
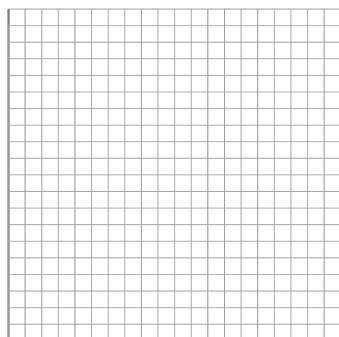
13.   Consider the scatterplot and
        then describe the correlation.

        Direction:

        Strength:

14.   Calculate the average point.

        $(\bar{x}, \bar{y})$:

15.   Draw the line of best fit (linear regression) through the average point. Then write the equation
        for it.

16.   Describe what the numbers in your equation mean in relation to the context of the problem.

17.   What would you expect the gas mileage to be for a 1700 pound car?

18.   What conclusion can you make about the relationship between the weight of a car and the
        gas mileage it will get.