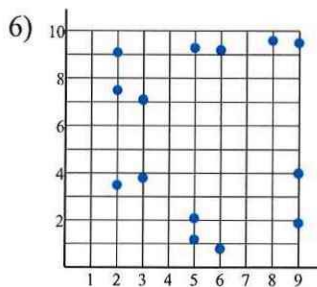
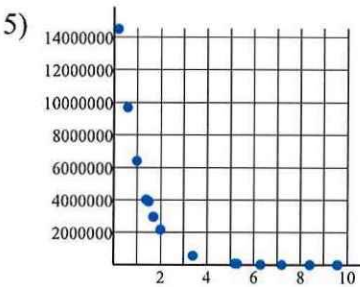
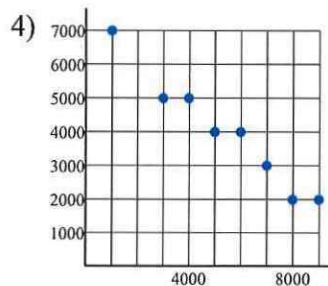
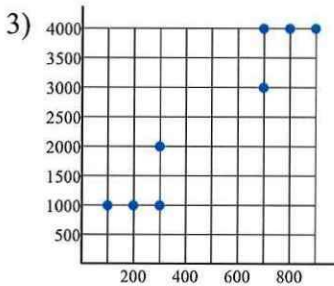
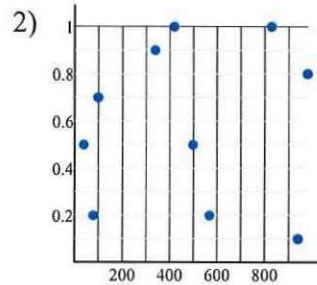
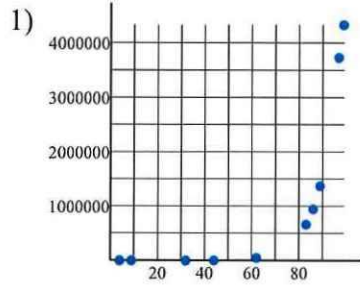


Scatter Plots

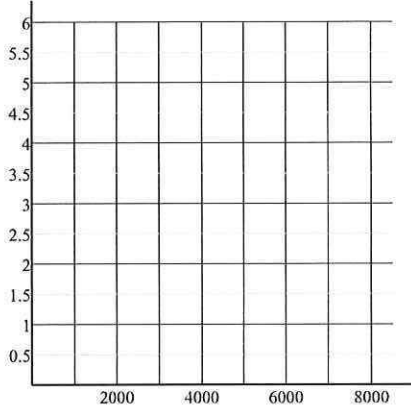
State if there appears to be a positive correlation, negative correlation, or no correlation. When there is a correlation, identify the relationship as linear or nonlinear.



Construct a scatter plot.

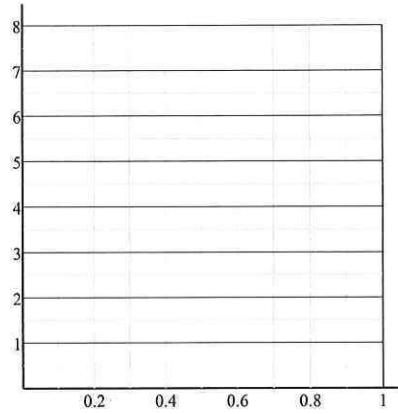
7)

X	Y	X	Y
300	1	1,800	3
800	1	3,400	3
1,100	2	4,700	4
1,600	2	6,000	4
1,700	2	8,500	6



8)

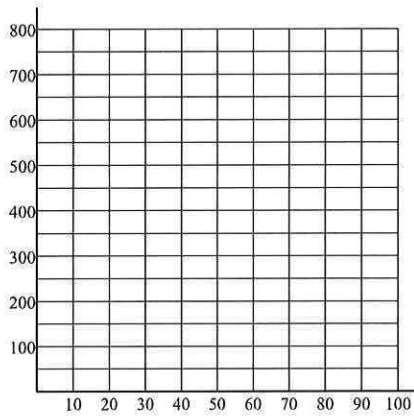
X	Y	X	Y	X	Y
0.1	7.5	0.4	3.3	0.6	1.8
0.1	7.6	0.6	1.4	0.9	1.5
0.3	4.5	0.6	1.7	1	1.7
0.4	3.2				



Construct a scatter plot. Find the slope-intercept form of the equation of the line that best fits the data.

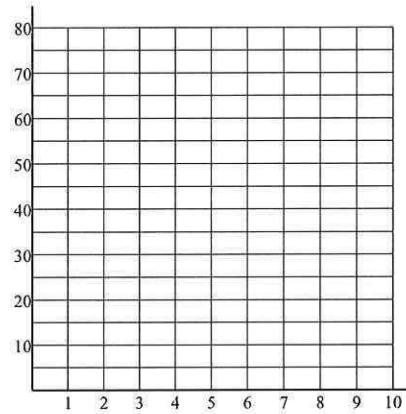
9)

X	Y	X	Y	X	Y
10	700	40	300	70	100
10	800	60	200	80	100
30	400	70	100	100	200
30	500				



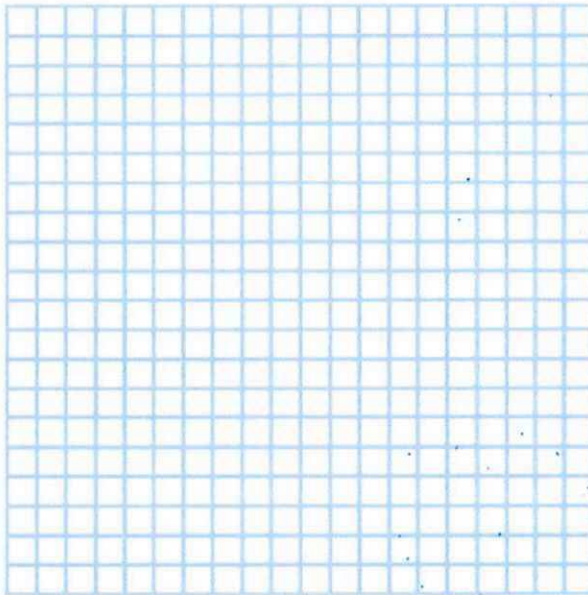
10)

X	Y	X	Y	X	Y
1	20	5	70	7	80
2	40	6	80	9	80
3	50	7	80	10	80
4	60				



Level 2 Practice:

Total Fat (x)	0	9	13	21	30	36	42
Total Calories (y)	0	260	320	425	452	463	550



1. Draw the scatterplot.
2. Identify the correlation.

Correlation: _____

3. Draw the line of best fit.

Y-intercept = _____ Slope = _____

Y = _____

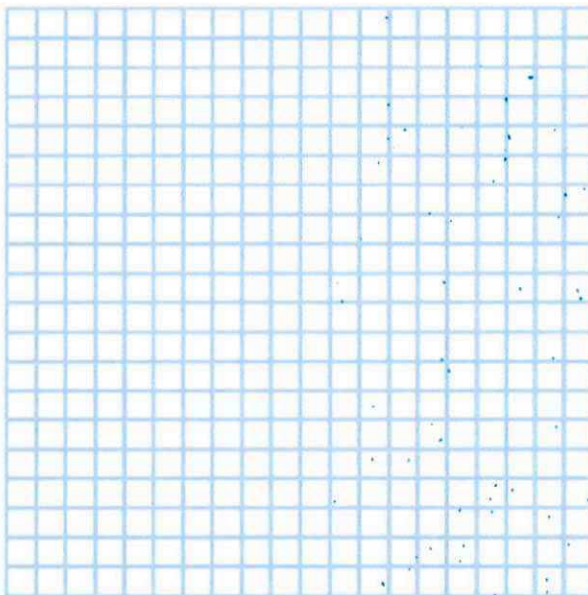
4. Use the line to answer these questions.

400 Calories = _____ Fat

_____ Calories = 25 grams of Fat

4. *Wind Speed and Wind Chill Temperature*

Wind Speed (x)	0	6	9	12	17	20	22
Temperature (y)	32	28	22	18	16	10	3



1. Draw the scatterplot.
2. Identify the correlation.

Correlation: _____

3. Draw the line of best fit.

Y-intercept = _____ Slope = _____

Y = _____

4. Use the line to answer these questions.

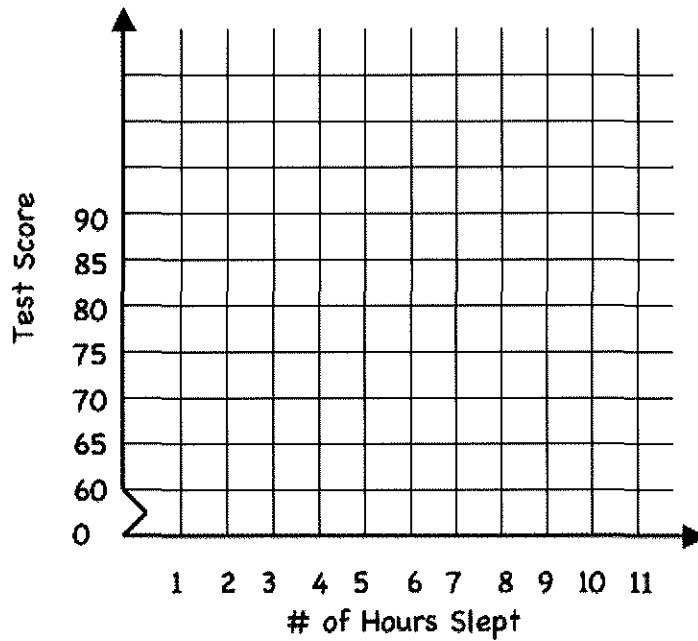
(Temp) 5 degrees = _____ Wind Speed

Temp of _____ = 15 mpr (Wind Speed)

Best fit line

7. A history teacher asked her students how many hours of sleep they had the night before a test. The data below shows the number of hours the student slept and their score on the exam. Plot the data on a scatter plot.

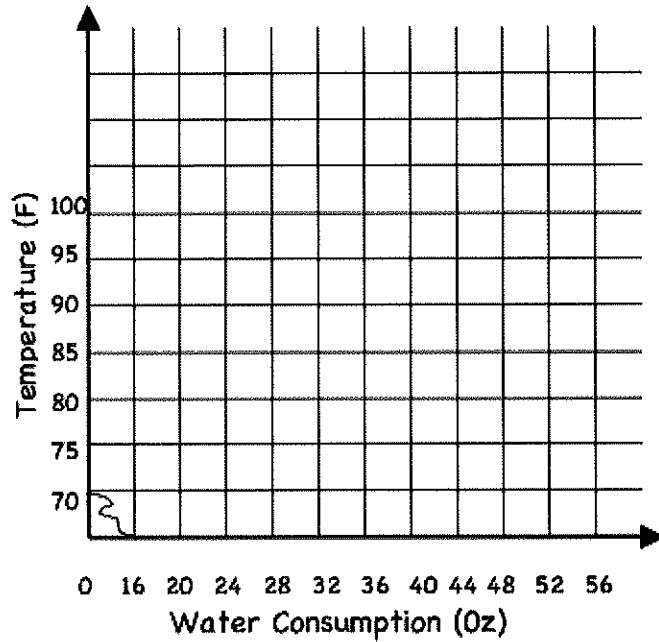
Hours Slept	8	7	7	8	6	5	7	4	9	7
Test Score	83	86	74	88	76	63	90	60	89	81



What is the best fit line? Show your work.

8. Assume that during a three-hour period spent outside, a person recorded the temperature and their water consumption. The experiment was conducted on 7 randomly selected days during the summer. The data is shown in the table below.

Day	Temperature (F)	Water Consumption (oz)
1	99	48
2	85	27
3	97	48
4	75	16
5	92	32
6	85	25
7	83	20



What is the best fit line? Show your work.

Experiment Level 3:

Goals:

- Create a scatterplot and line of best fit using technology.
- Identify the correlation of a scatterplot.
- Use the line of best fit to make predictions from the data

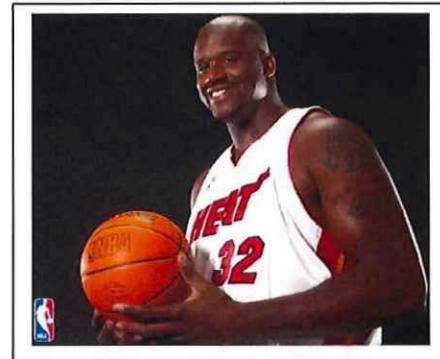
Concept # _____

Foot & Hand Size Experiment

Shaquille O'Neal is a very large man.
He wears size 20 shoes.
His foot is 41 cm long.

Your goal today is to figure out the size of his hand.

- Collect data about 8 classmates foot size and hand size.
- Create a scatterplot. (on paper or DESMOS)
- Find a line of best fit.
- Make a prediction about how big Shaq's hand is.



1. Do you expect the scatterplot to have a positive, negative, or no correlation? Explain.

2. Collect the data.

Student Name	Foot Size (cm)	Hand Size (cm)	Foot Size / Hand Size

3. Create your graph on graph paper or DESMOS. Draw in the line of best fit.

4. Write down the linear regression line. (the equation for the line of best fit)

Y = _____

What is the slope?

What is the y-intercept?

6. Use your linear model to predict Shaq's hand size. Explain.

Shaq's Hand Size = _____ cm

