

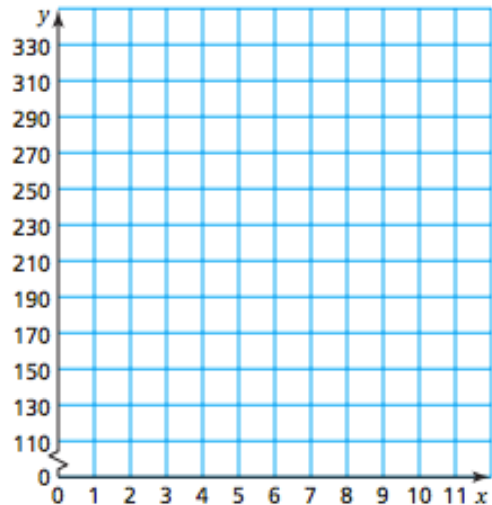
**Algebra 1**  
**Preview 4.4**

Name: \_\_\_\_\_

You are a biologist and are studying bat populations in an abandoned mine. The table below represents the bat populations that you have observed.

Year, $x$	0	1	2	3	4	5	6	7
Bats (thousands), $y$	327	306	299	270	254	232	215	197

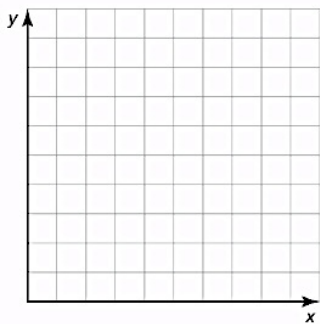
1. Plot the points onto the given graph.
2. Analyze the data, as the number of years increase, what is happening to the bat population?
3. In your own words, describe how you could use this data to estimate the bat population after observing for 10 years.



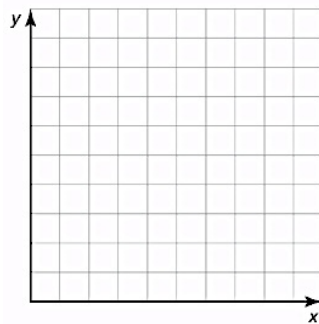
**Look at your textbook on page 197, and read about correlation.**

4. In your own words, define correlation:
5. Draw three graphs to represent examples of a positive, negative, and no correlation.

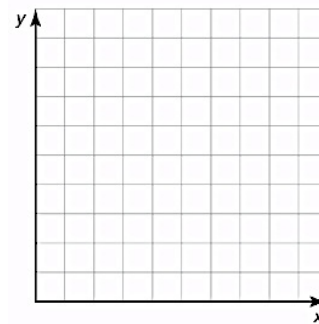
Positive



Negative

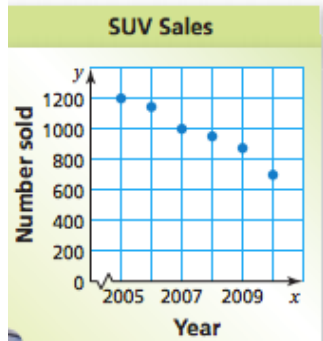


No Correlation



6. Look at the graphs below and determine if they have a positive correlation, negative correlation, or no correlation. Describe the data.

a)

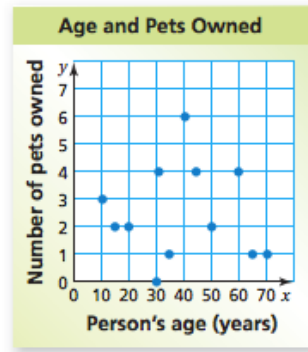


Correlation: \_\_\_\_\_

As the number of years increase \_\_\_\_\_

\_\_\_\_\_

b)

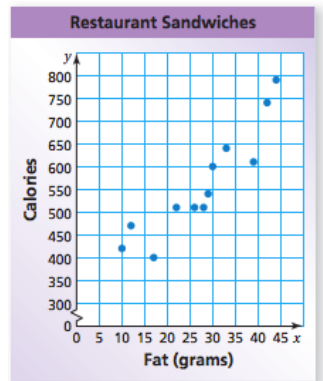


Correlation: \_\_\_\_\_

As a person's age increases \_\_\_\_\_

\_\_\_\_\_

c)

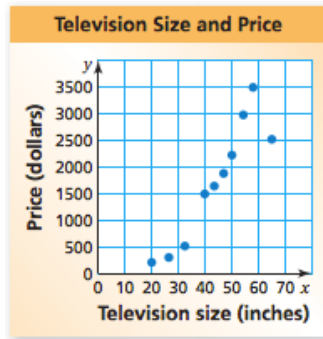


Correlation: \_\_\_\_\_

As the number of fat grams increase \_\_\_\_\_

\_\_\_\_\_

d)



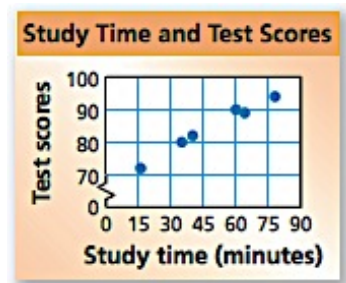
Correlation: \_\_\_\_\_

As the TV size increase \_\_\_\_\_

\_\_\_\_\_

7. Mrs. Jones surveyed her 9<sup>th</sup> grade science class after a test. Answer the questions based on the table below.

- What grade did the student who studied for 60 minutes receive?
- Estimate the grade that the student who studied for 16 minutes receive?



- What can you say about the students' test scores based on the data?