

Unit 9: Data Analysis

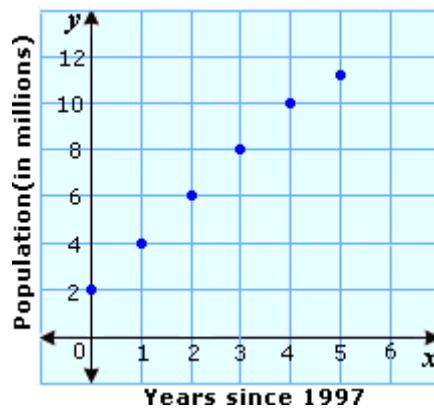
Quiz Study Guide

Directions: In each situation, tell whether the correlations is positive, negative or none. Explain how you know.

1. Hours of practice in the batting cage and your batting average.
2. The number of years a person has worked at the same company and that person's annual salary.
3. Number of brothers and sisters that you have and your height.
4. The length of time that you've been eating a Jolly Rancher and the size of the Jolly Rancher.

Directions: Use the given scatter plot to answer the following questions.

The scatter plot shows the population of California from 1997 to 2002.



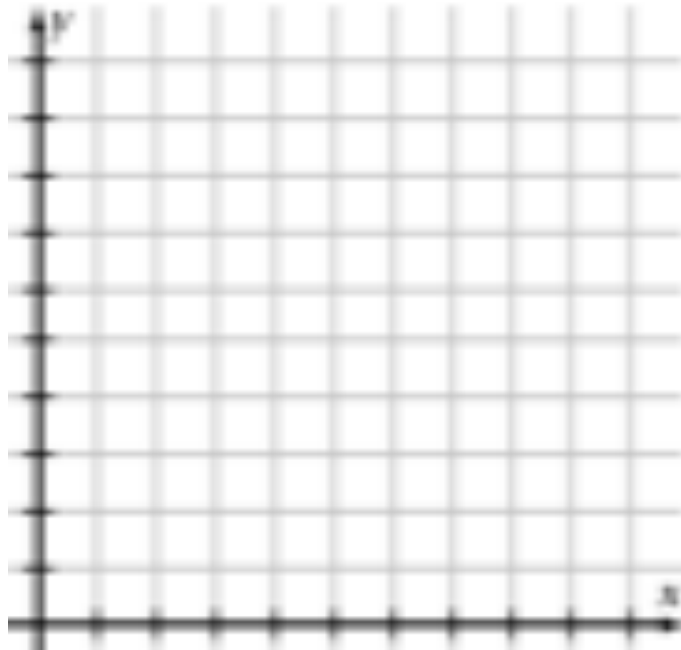
5. What kind of correlation exists between them? Explain.
6. Use the scatter plot to predict what the population would be if it has been 6 years since 1997?

Directions for questions 7 and 8:

- a. Make a scatter plot with the given data. Label the axes.
 - b. Determine whether there is a positive, negative, or no correlation.
 - c. Draw a trend line and write its equation.
 - d. Use the equation you wrote to answer the given question.
7. Students measured the diameters and circumferences of the tops of a variety of cylinders. Below are the data that they collected.

Cylinder Tops									
Diameter (cm)	3	3	5	6	8	8	9.5	10	10
Circumference (cm)	9.3	9.5	16	18.8	25	25.6	29.5	31.5	30.9

- a. Scatter plot. (Don't forget the labels!) Be sure to use equal intervals when numbering.

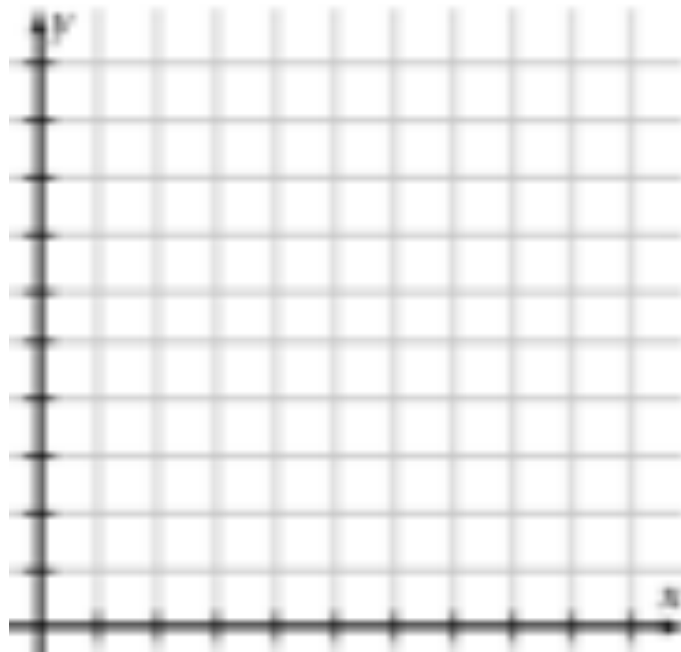


- b. What type of correlation is shown on this graph?
- c. Draw a **good** trend line and write the equation of the trend line that you drew.
- d. Use the equation to estimate the diameter of a cylinder with a circumference of 22 cm.

8. The table shows the number y (in thousands) of alternative-fueled vehicles in use in the United States x years after 1997. Approximate the best-fitting line for the data.

Years Since 1997	0	1	2	3	4	5
Vehicles (in thousands)	280	295	322	395	425	471

- a. Scatter plot. (Don't forget the labels!) Be sure to use equal intervals when numbering.



- b. What type of correlation is shown on this graph?
- c. Draw a **good** trend line and write the equation of the trend line that you drew.
- d. Use the equation to predict how many alternative-fueled vehicles will be driven in 2017.