

SCATTER PLOTS AND ASSOCIATION

Answer the following questions, and be sure to explain your thinking.

1. Hector surveyed 500 people and asked them how far they drive to work and what the last digit of their phone number is. He used the results to make a scatter plot.

a. What type of association should he expect to see in the scatter plot?

b. Explain your reasoning.

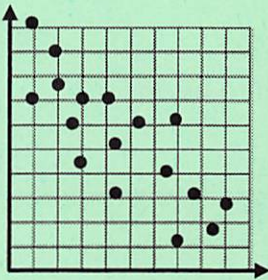
2. Jules conducted a survey and asked 100 people how many years of education they have and what their annual income is. She used the results to make a scatter plot.

a. What type of association should she expect to see in the scatter plot?

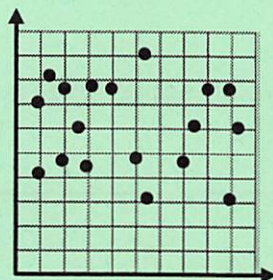
b. Explain your reasoning.

In questions 3-6, label the type of association shown by the scatter plot as positive, negative or none.

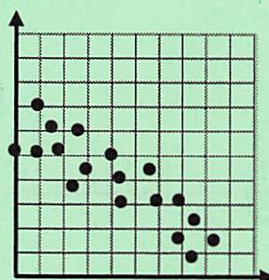
3.



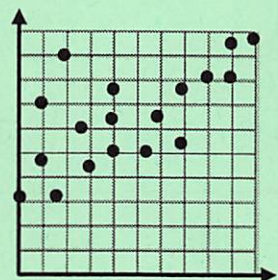
4.



5.



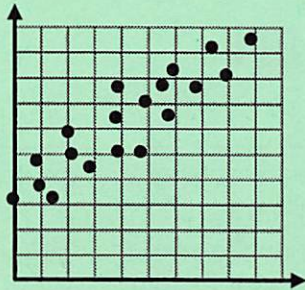
6.



7. Which scatter plot(s) above could be used to show the relationship between a person's age and a person's height?

8. Which scatter plot(s) above could be used to show the relationship between a person's age and the number of syllables in a person's first and last name?

9. Which best describes the association shown in the scatter plot below?



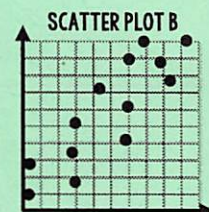
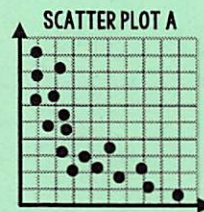
- a. Negative and linear
- b. Negative and non-linear
- c. Positive and linear
- d. Positive and non-linear

10. Which would NOT likely be the variables represented on the scatter plot in #9?

- a. The number of miles driven and the gallons of gas used
- b. The number of students in a school and the number of unused lockers
- c. The number of items ordered at a restaurant and the cost of the bill
- d. The number of customers in a store and the length of the wait at the register

11. Mrs. Dominick's class did a survey about the number of chores students did and the amount of allowance that student earned. Bryan thinks the association is negative because they found that as the number of chores decreased, the amount of allowance also decreased. Is Bryan correct? Explain.

12. Use the two scatter plots to answer the questions below.



- a. Which scatter plot has a stronger association? How do you know?
- b. Which scatter plot appears to be linear?