

Module 14 Review: Scatter Plots

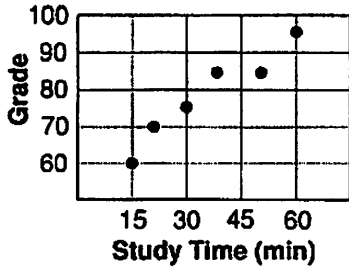
Multiple Choice

Identify the choice that best completes the statement or answers the question. Use your textbook and notes from class to help you solve the questions.

a

1. Which of the statements is true about the data displayed in the scatter plot?

Study Time vs. Test Grades



a.

It shows a positive correlation.

c. It shows no correlation.

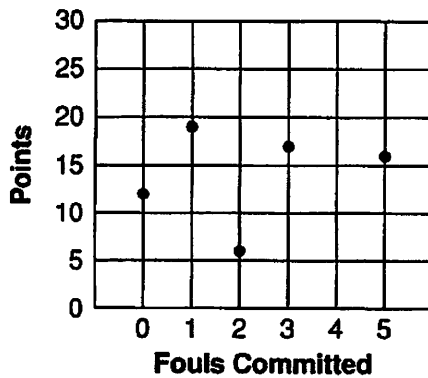
b. It shows a negative correlation.

d. As study time increases, grade decreases.

c

2. Which of the statements is true about the data displayed in the scatter plot?

Minutes vs. Points



a. It shows a positive correlation.

c.

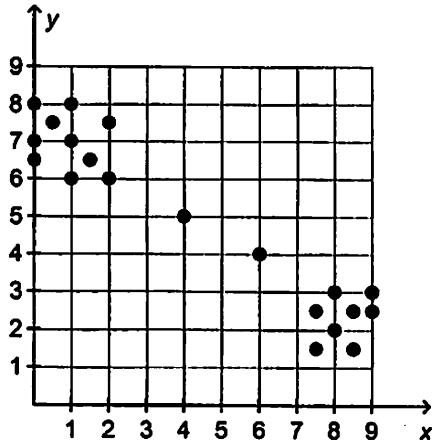
It shows no correlation.

b. It shows a negative correlation.

d. As fouls increase, points decrease.

C

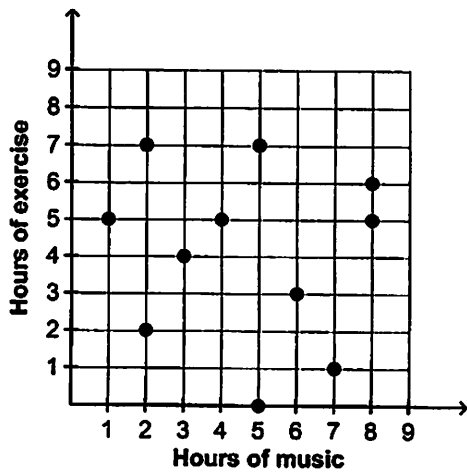
3. Which statement *best* describes any clusters there are in the data displayed in the scatter plot shown?



- a. The data cluster around (1, 7).
- b. The data cluster around (8.5, 2).
- c. The data cluster around (1, 7) and (8.5, 2).
- d. There are no clusters.

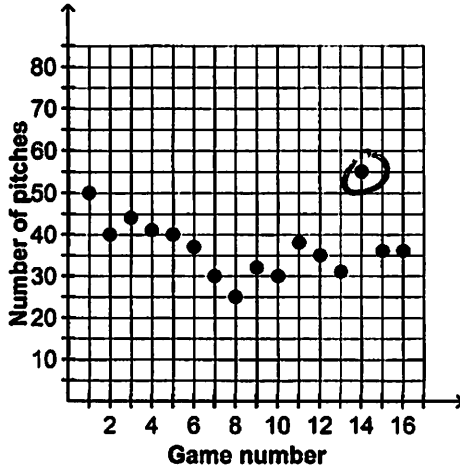
d

4. The scatter plot shows the number of hours a person listens to music weekly and the number of hours the person exercises weekly. Which statement *best* describes the pattern of association between the two variables?

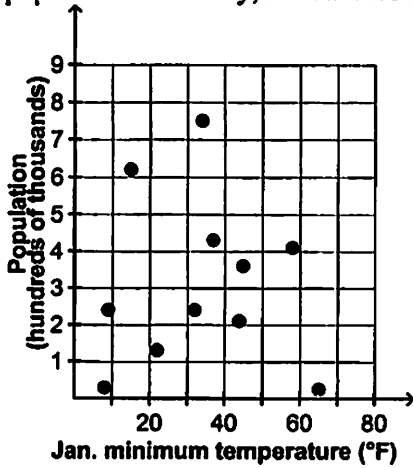


- a. There is a positive, linear association between the two variables.
- b. There is a positive, nonlinear association between the two variables.
- c. There is a negative, nonlinear association between the two variables.
- d. There is no association between the two variables.

5. Alfonso is the starting pitcher for his baseball team. The scatter plot shows the number of pitches he throws each game during one season. Which point, if any, is an outlier?



- a. (1, 50)
 - b. (8, 25)
 - c. (14, 55)
 - d. There are no outliers.
6. The scatter plot shows a city's average minimum temperature, in degrees Fahrenheit, for January and the population of the city, in hundreds of thousands. Which statement best describes the data?



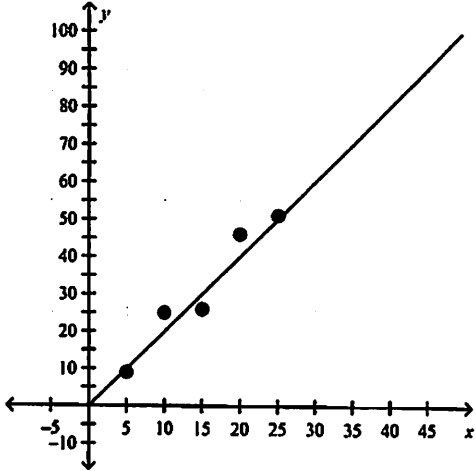
- a. There is a positive, linear association between the population and the temperature.
- b. There is a positive, nonlinear association between the population and the temperature.
- c. There is a negative, nonlinear association between the population and the temperature.
- d. There is no association between the population and the temperature.

a 7. Karen receives tips for some of her sales.

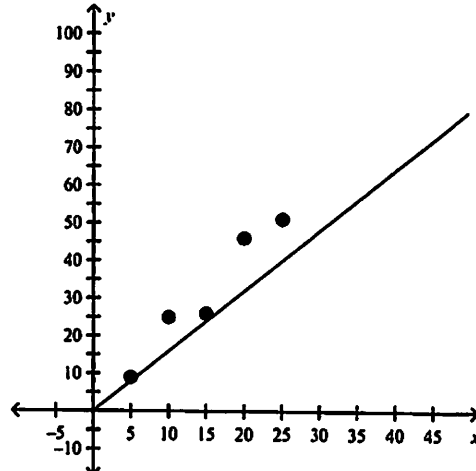
Items Sold	Tips Collected (\$)
5	9
10	25
15	26
20	46
25	51

Which graph shows the best model for the data?

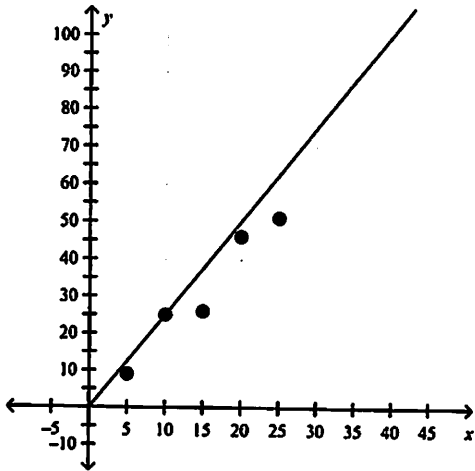
a.



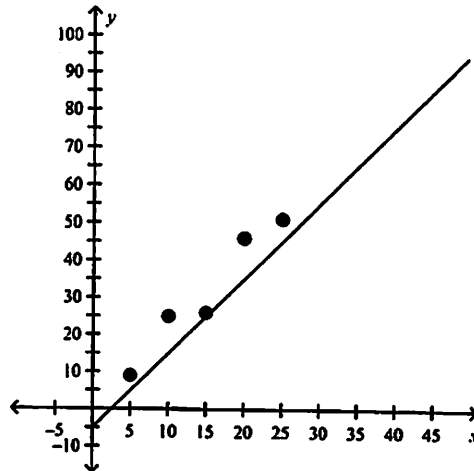
c.



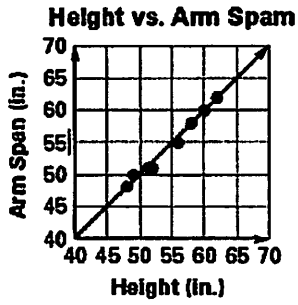
b.



d.



b 8. Which gives the line of best fit?



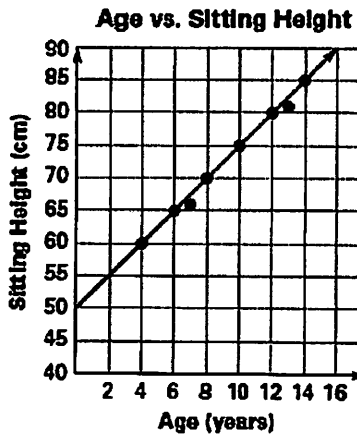
a. $f(x) = 45x$

b. $f(x) = x$

c. $f(x) = 2x$

d. $f(x) = 45x + 45$

b 9. Which gives the line of best fit?



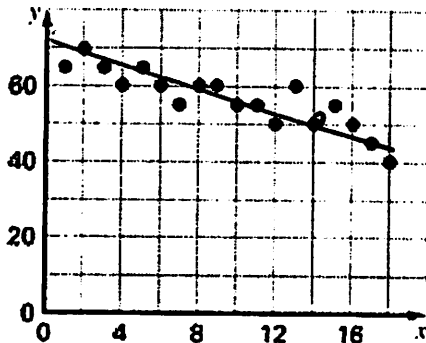
a. $f(x) = 2.5x$

b. $f(x) = 2.5x + 50$

c. $f(x) = 60x$

d. $f(x) = 60x + 4$

c 10. Which linear equation approximates the best fit to the data?



12 (1,65) 15
13 50

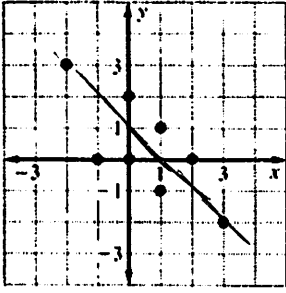
a. $y = -2x + 65$

b. $y = -5x + 100$

c. $y = -x + 68$

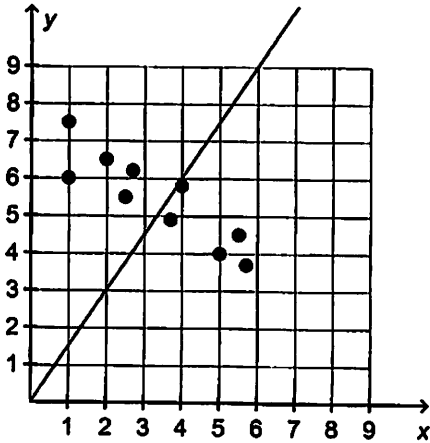
d. $y = -0.5x + 55$

a 11. Which equation best models the data in the scatter plot?



- a. $y = -x + 1$
- b. $y = -x - 1$
- c. $y = x + 1$
- d. $y = x - 1$

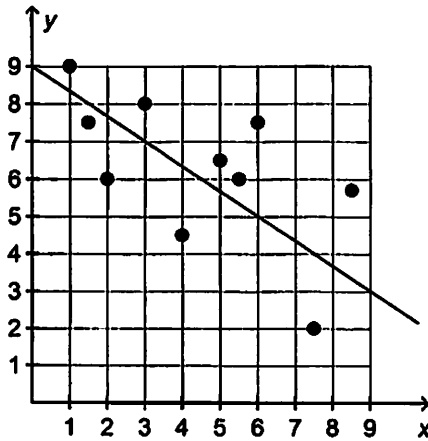
b 12. Why is the line a good fit or not a good fit for the data shown in the scatter plot?



- a. There are about an equal number of data points above and below the line, so the line is a good fit for the data.
- b. There are about an equal number of data points above and below the line, but the line is not a good fit for the data because it does not follow the general trend of the data.
- c. There is a nonlinear association between the values of x and y , so the line is not a good fit.
- d. There is no association between the values of x and y , so the line is not a good fit.

13. Why is the line a good fit for the data shown in the scatter plot?

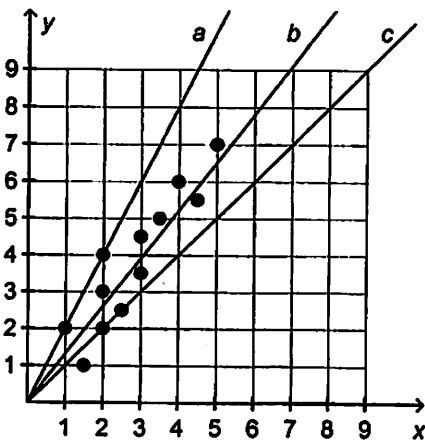
b



- a. There is a strong linear association between the values of x and y , and the line follows this general trend.
- b. There is a weak linear association between the values of x and y , and the line follows this general trend.
- c. There is a nonlinear association between the values of x and y .
- d. There is no association between the values of x and y .

14. Which of the following lines *best* fits the data shown in the scatter plot?

b



- a. Line *a*
- b. Line *b*
- c. Line *c*
- d. None of the lines fit the data well.