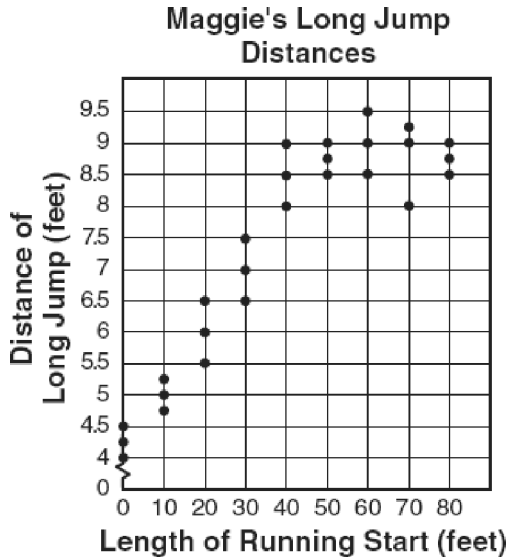


**Unit 11: Scatter Plots**

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

Date: \_\_\_\_\_

1. Maggie made the scatter plot below to record the distances she jumped with different running start lengths.



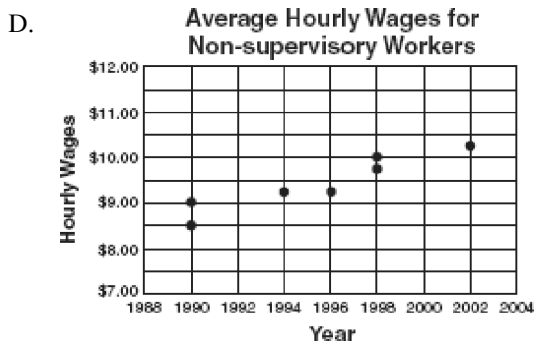
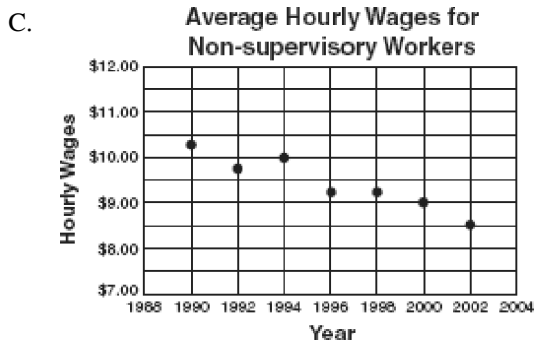
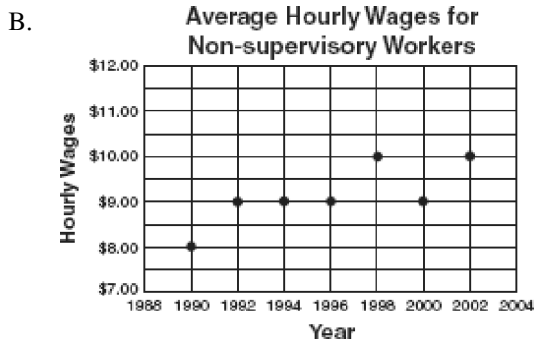
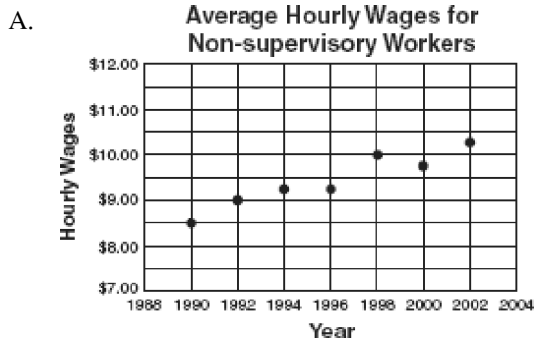
Which is the distance of Maggie's longest jump when she had a running start of 20 feet?

- A. 4.5 feet                      B. 6 feet  
 C. 6.5 feet                      D. 9 feet

2. The table below shows the average hourly wages for non-supervisory workers for the years 1990–2002. Which scatter plot most accurately shows this information?

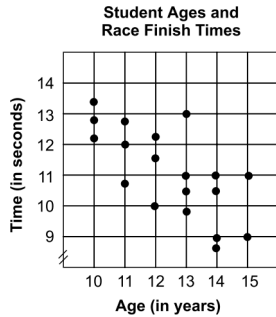
**Average Hourly Wages for Non-supervisory Workers**

Year	1990	1992	1994	1996	1998	2000	2002
Average Hourly Wage	\$8.50	\$9.00	\$9.25	\$9.25	\$10.00	\$9.75	\$10.25



Unit 11: Scatter Plots

3. Use the scatter plot to answer the question.



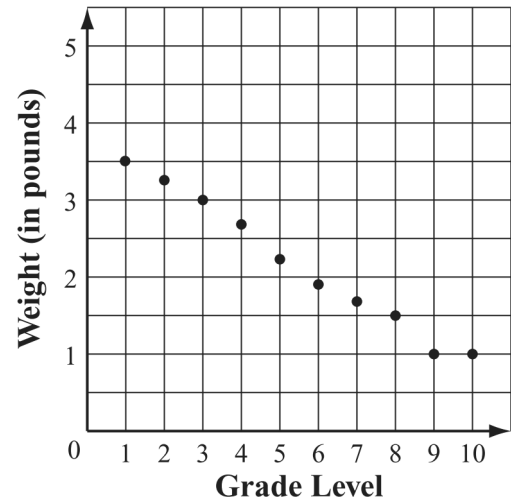
In the scatter plot, each dot represents one student who participated in the 50-meter race. Ben is 15 years old. Based on the information in the scatter plot, what was Ben's time in the race?

- A. 9 seconds
- B. 10 seconds
- C. 11 seconds
- D. It cannot be determined.

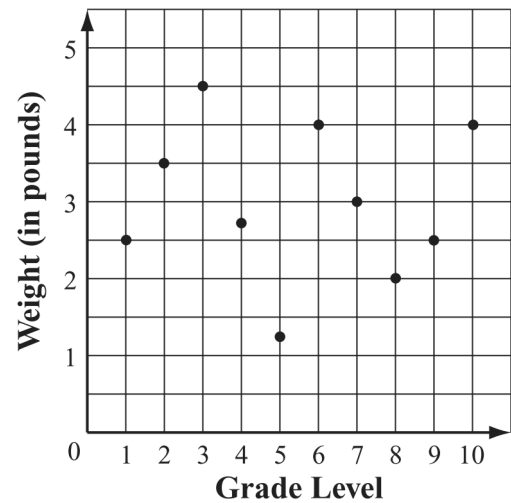
4. In David's school district, there is a positive correlation between the grade level and the weight of the mathematics textbook used by each grade.

Which of the following scatterplots best represents this correlation?

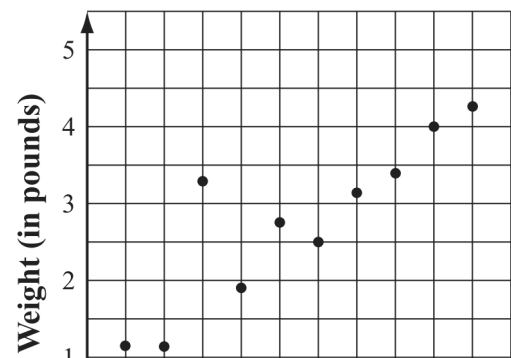
A. **Mathematics Textbooks**



B. **Mathematics Textbooks**

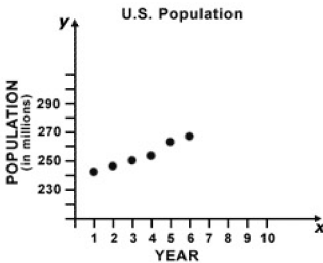


C. **Mathematics Textbooks**



Unit 11: Scatter Plots

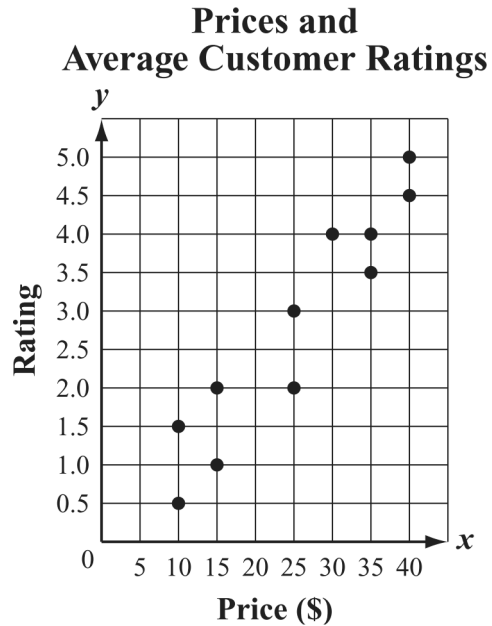
5. Use the graph below to answer the following question



Which equation could describe the line of best fit for the graph above?

- A.  $y = 5x + 236$       B.  $y = -5x + 236$   
 C.  $y = \frac{1}{5}x + 236$       D.  $y = \frac{-1}{5} + 236$

6. Karl made the scatterplot below of the price and average customer rating for each of 11 computer games.

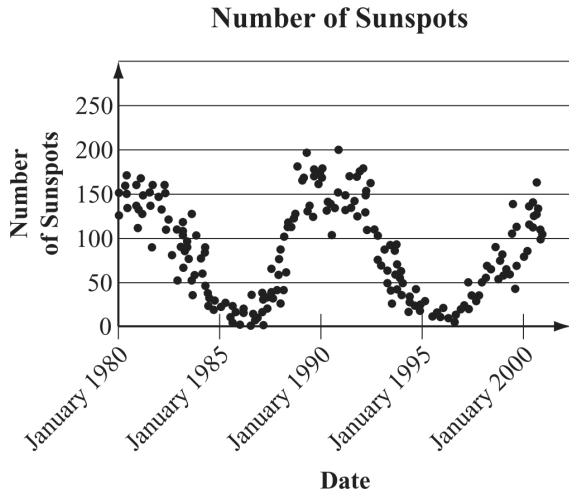


Based on the scatterplot, which of the following statements is true?

- A. In general, as the prices increase, the ratings increase.  
 B. In general, as the prices increase, the ratings decrease.  
 C. The price of a game and its rating do not appear to be related to each other.  
 D. No matter what the prices were, each game received approximately the same rating.

Unit 11: Scatter Plots

7. A sunspot is a dark area on the surface of the Sun that appears and disappears frequently. The scatterplot below shows the number of sunspots that appeared during each month from January 1980 through December 2000.



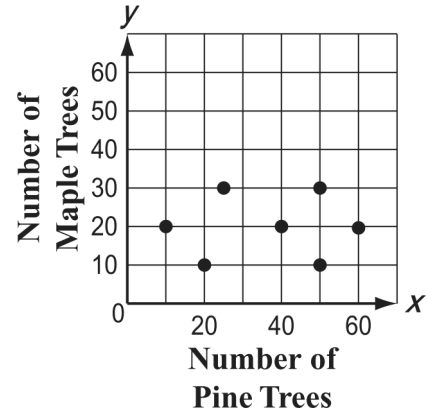
Which of the following best represents the range of the number of sunspots for the data shown in the scatterplot?

- A. 50    B. 100    C. 150    D. 200

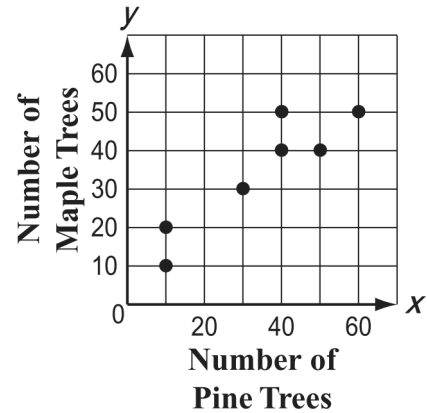
8. Allie counted the number of pine trees and the number of maple trees in each of seven study areas. She made a scatterplot of her data, where each point represents one study area.

Allie found that, in general, the larger the number of pine trees in a study area, the smaller the number of maple trees. Which of the following is *most likely* Allie's scatterplot?

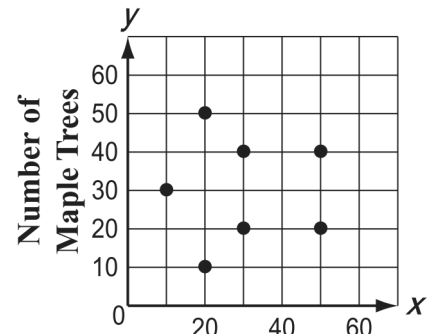
- A. **Numbers of Pine and Maple Trees**



- B. **Numbers of Pine and Maple Trees**

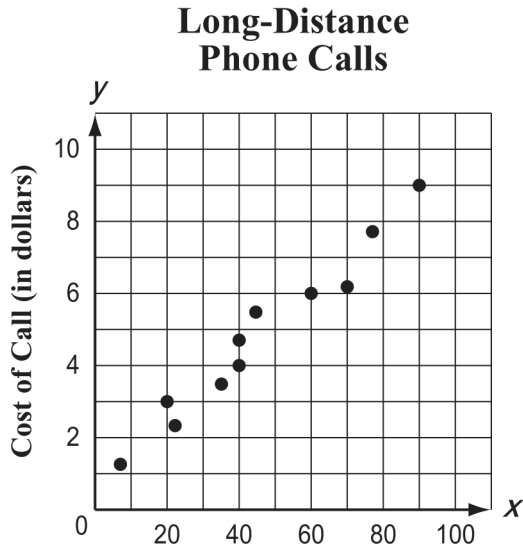


- C. **Numbers of Pine and Maple Trees**



Unit 11: Scatter Plots

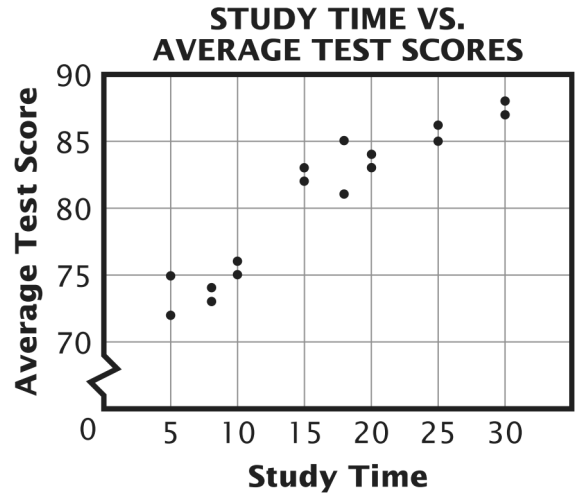
9. The scatterplot below shows the relationship between the length of a long-distance phone call and the cost of the phone call.



Based on the line of best fit for the scatterplot, which of the following amounts is closest to the cost of a 120-minute phone call?

- A. \$10    B. \$12    C. \$15    D. \$20

10. Mr. Thomas wanted to know if the amount of class time that he gave students to study affected their test scores. The scatter plot below shows the results.

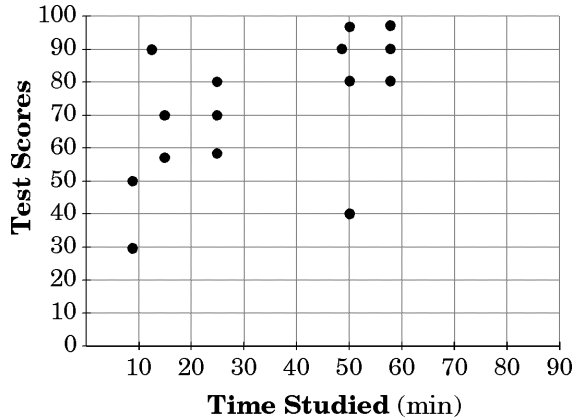


What kind of relationship between class study time and test scores is shown on the scatter plot?

- A. no correlation  
 B. positive correlation  
 C. negative correlation  
 D. positive then negative correlation

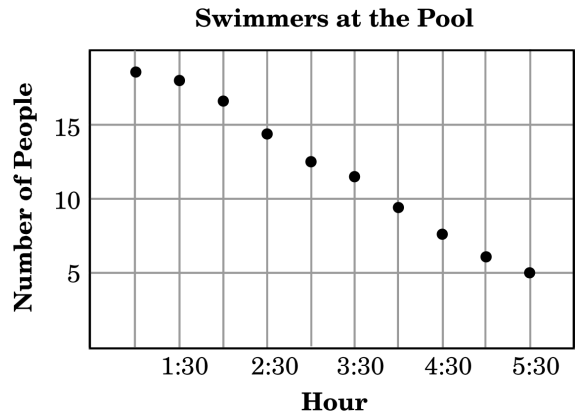
Unit 11: Scatter Plots

11. Which relationship is suggested by the scatter plot below?



- A. Study time does not affect test scores.
- B. The longer the student studied, the higher the test score.
- C. The longer the student studied, the lower the test score.
- D. Students who did not study received a high test score.

12. The scatterplot below shows the number of people at the swimming pool every half hour from 1:00 pm until 5:30 pm .

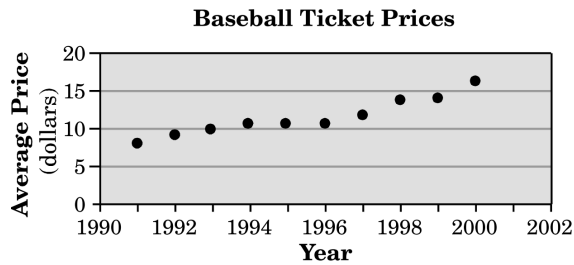


From this scatterplot, what conclusion can be made about the number of people at the pool from 1:00 pm to 5:30 pm ?

- A. The number of people at the pool steadily decreases and shows a negative correlation with time.
- B. The number of people at the pool steadily decreases and shows a positive correlation with time.
- C. The number of people at the pool steadily increases and shows a negative correlation with time.
- D. The number of people at the pool steadily increases and shows a positive correlation with time.

Unit 11: Scatter Plots

13. The scatterplot shows the average price of a major-league baseball ticket from 1991 to 2000.

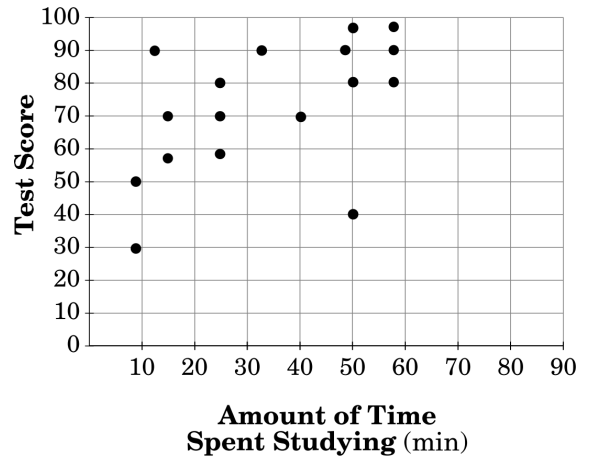


What correlation, if any, exists in the data?

- A. positive                      B. negative  
 C. constant                      D. none
14. Felipe is collecting data comparing air conditioning costs to the daily outdoor temperature during the summer of 2004. When Felipe draws his scatterplot, which variable should be used as the dependent variable?

- A. date  
 B. indoor temperature  
 C. outdoor temperature  
 D. air conditioning costs

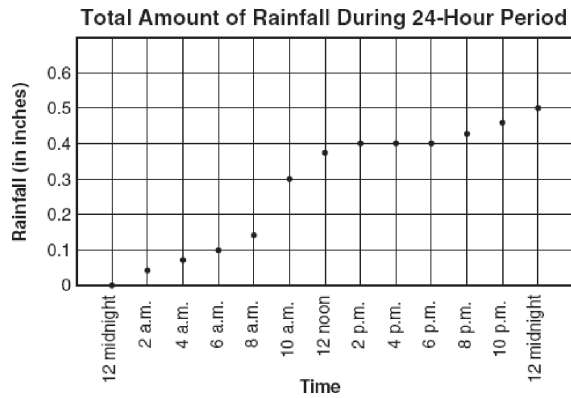
15. Which relationship is suggested by the scatterplot below?



- A. The amount of time spent studying does not affect a test score.  
 B. the longer the amount of time spent studying, the higher the test score  
 C. the longer the amount of time spent studying, the lower the test score  
 D. the shorter the amount of time spent studying, the higher the test score

Unit 11: Scatter Plots

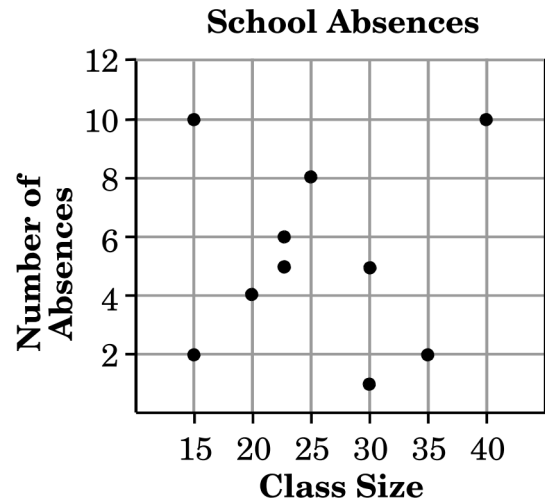
16. The graph below shows the total amount of rainfall in a city during a 24-hour period.



During which two-hour period did the total amount of rainfall remain the same?

- A. 4 am to 6 am
- B. 8 am to 10 am
- C. 4 pm to 6 pm
- D. 10 pm to 12 midnight

17. The scatterplot shows the number of absences in a week for classes of different sizes. Trevor concluded that there is a positive correlation between class size and the number of absences.



Which statement *best* describes why Trevor's conclusion was incorrect?

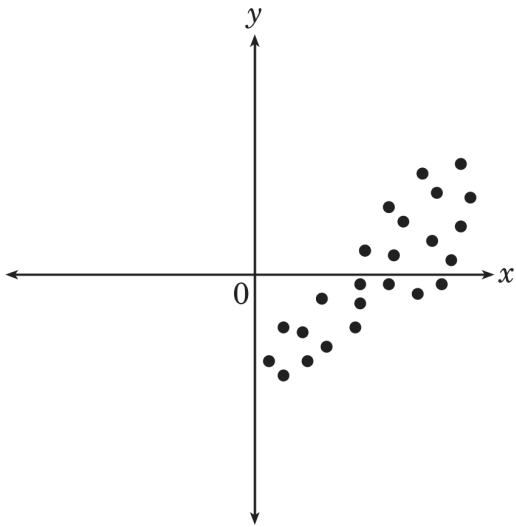
- A. The largest class does not have the most absences.
- B. The smallest class does not have the least number of absences.
- C. The data show no relationship between class size and number of absences.
- D. The data show a negative relationship between class size and number of absences.



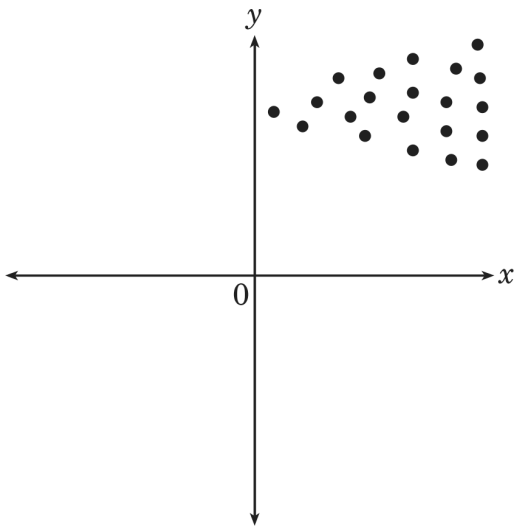
Unit 11: Scatter Plots

18. Which scatterplot shows a positive correlation between the variables?

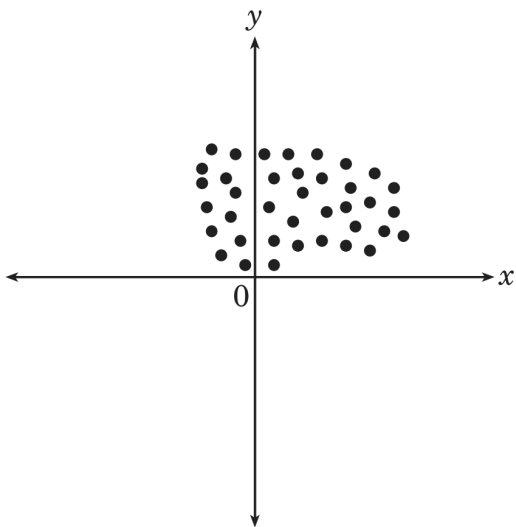
A.



B.

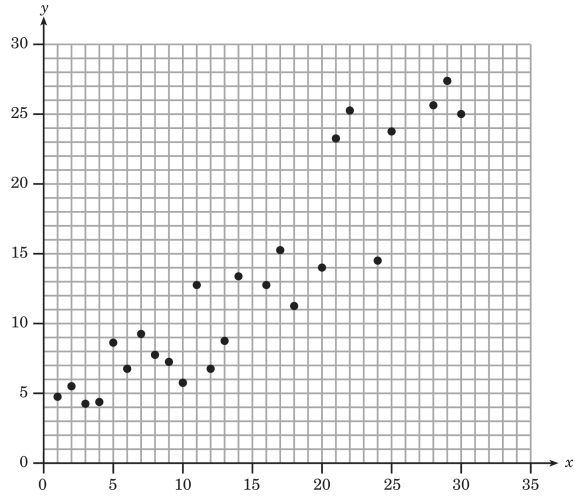


C.



D.

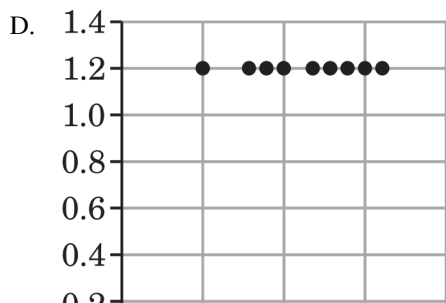
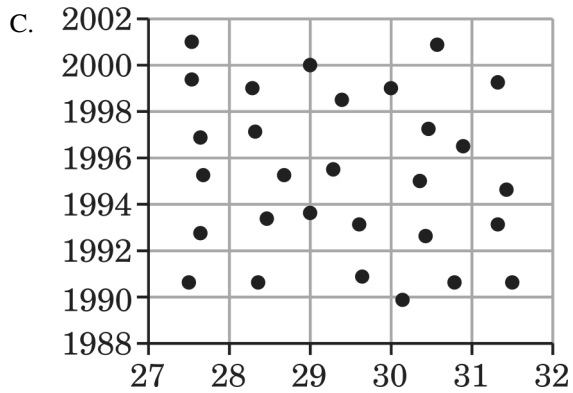
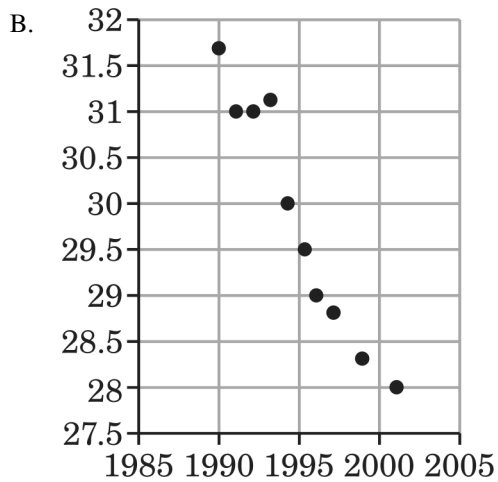
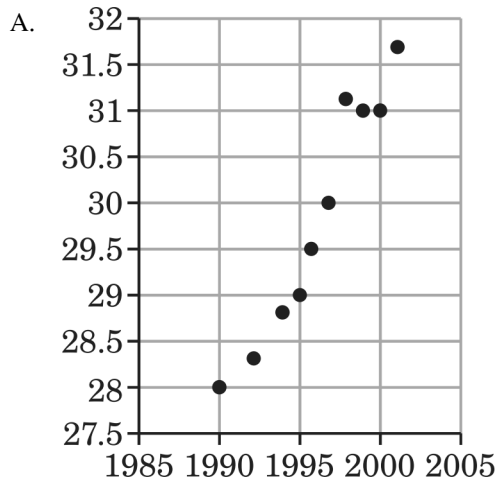
19. The data displayed represent what type of correlation?



- A. a positive correlation where the y values are exactly predicted by the line of best fit
- B. a negative correlation where the y values are exactly predicted by the line of best fit
- C. a positive correlation where the y values are approximately predicted by the line of best fit
- D. a negative correlation where the y values are approximately predicted by the line of best fit

Unit 11: Scatter Plots

20. Which scatterplot displays a negative correlation?



21. **Population Boom**

A small town experienced a population boom during the 1990s. The table below shows the town's population from 1990 to 1997.

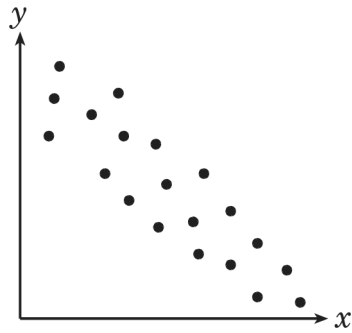
**POPULATION GROWTH**

Year	Population
1990	159
1991	215
1992	289
1993	370
1994	494
1995	576
1996	652
1997	790

On a sheet of graph paper, construct a graph of the population growth from 1990 to 1997.

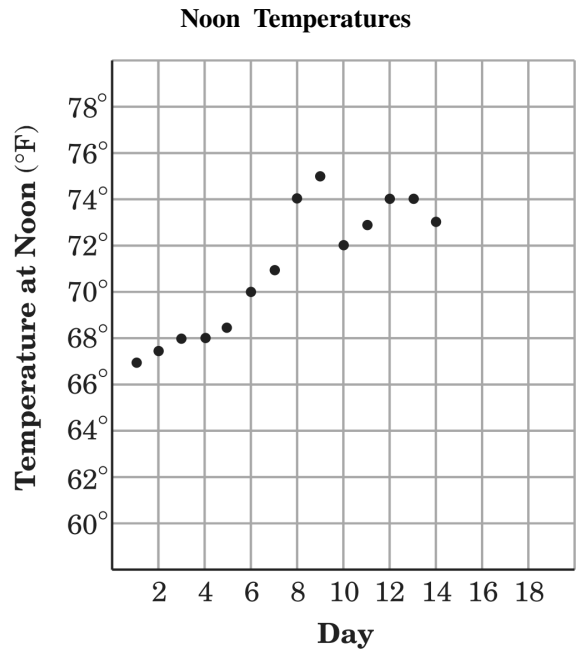
Unit 11: Scatter Plots

22. This scatterplot could show the relationship between which two variables?



- A. speed of an airplane ( $x$ ) vs. distance traveled in one hour ( $y$ )
- B. outside air temperature ( $x$ ) vs. air conditioning costs ( $y$ )
- C. age of an adult ( $x$ ) vs. height of an adult ( $y$ )
- D. distance traveled ( $x$ ) vs. gas remaining in the tank ( $y$ )

23. Kevin made a scatterplot of noon temperatures for a two-week period.

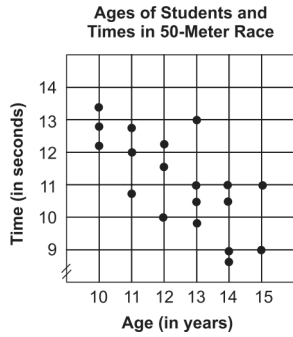


Which statement about the data is *most accurate*?

- A. The temperature had a slight increase each day.
- B. The temperature had a slight decrease each day.
- C. There was a trend for the temperature to increase during the second week.
- D. There was a trend for the temperature to increase during the first week.

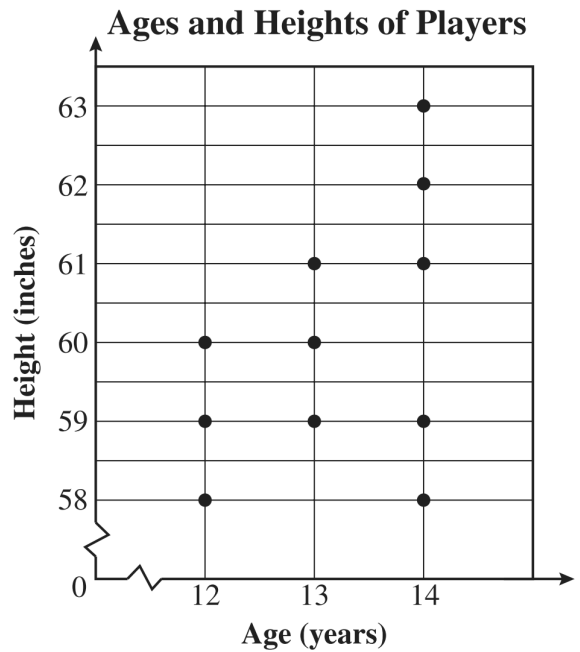
Unit 11: Scatter Plots

24. In the scattergram, each dot represents one student who participated in the 50-meter race. Vicki won the race. According to the scattergram, how old is Vicki?



- A. 10 years old                      B. 13 years old  
 C. 14 years old                      D. 15 years old

25. The scatterplot below shows the ages and heights of 11 players on the school football team. Each dot represents one player.



What is the total number of 14-year-olds who are *more than* 60 inches tall?

- A. 0                      B. 2                      C. 3                      D. 5

Unit 11: Scatter Plots      01/22/2013

1.  
Answer:      C
2.  
Answer:      A
3.  
Answer:      D
4.  
Answer:      C
5.  
Answer:      A
6.  
Answer:      A
7.  
Answer:      D
8.  
Answer:      D
9.  
Answer:      B
- 10.
- 11.
12.  
Answer:      A
13.  
Answer:      A
14.  
Answer:      D
15.  
Answer:      B
16.  
Answer:      C
17.  
Answer:      C
18.  
Answer:      A
19.  
Answer:      C
20.  
Answer:      B
- 21.

22.  
Answer:      D
23.  
Answer:      D
24.  
Answer:      C
25.  
Answer:      C