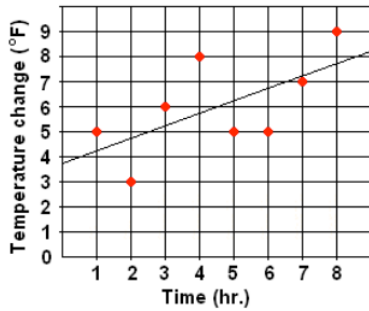


Worksheet: Lines of Best Fit

1. Greg recorded the temperature change over a course of 8 hours.



Use the given line of best fit to approximate the rate of change relative to the scatter plot above.

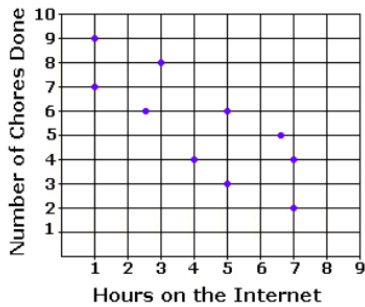
- A. 1 degree/hour
- B. $1\frac{1}{2}$ degree/hour
- C. $3\frac{3}{4}$ degrees/hour
- D. 2 degrees/hour

2. There was a fair at Brad's high school this weekend. It was open for 10 hours on Saturday and the ticket sales were recorded. The ticket sales for Saturday can be approximated by the equation $y = 4.6x + 12.2$. What was the approximate rate of change for the number of tickets sold?

Hours Open	Tickets Sold
1	15
2	21
3	27
4	32
5	36
6	41
7	43
8	49
9	53
10	58

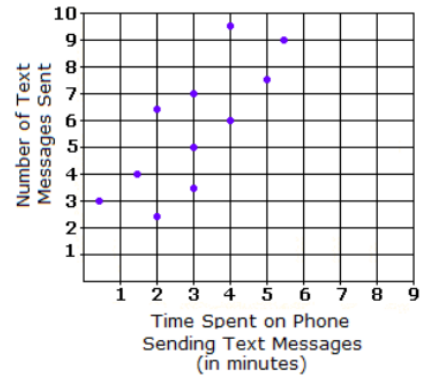
- A. 7.6 tickets/hour
- B. 10 tickets/hour
- C. 4.6 tickets/hour
- D. 12.2 tickets/hour

3. Choose the equation below which would be the line of best fit for the scatter plot.



- A. $y = -\frac{3}{4}x + 10$
- B. $y = -x + 10$
- C. $y = -\frac{1}{2}x + 10$
- D. $y = -\frac{3}{2}x + 10$

4. Choose the equation below which would be the line of best fit for the scatter plot.



- A. $y = 2x$
- B. $y = 4x$
- C. $y = x$
- D. $y = 3x$

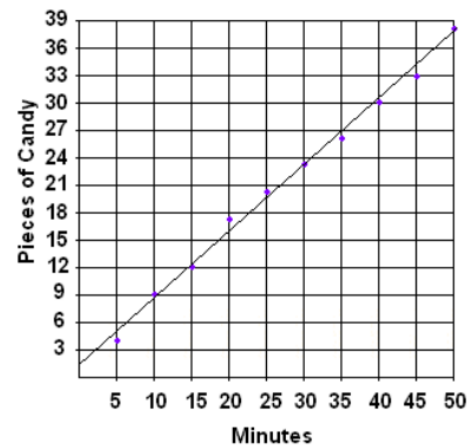
5. Betsy observed the punch volume at the beginning of school party. The information is in the table below.

Minutes	Volume of Punch (L)
1	50
2	46
3	41
4	43
5	38
6	34
7	37
8	30
9	28
10	27

If the best-fit equation is $y = -2.485x + 51.067$, what will the approximate volume of punch be at the 13 minute mark?

- A. 18.762 L
- B. 23.733 L
- C. 17.973 L
- D. 16.764 L

6.



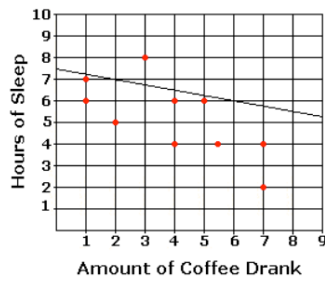
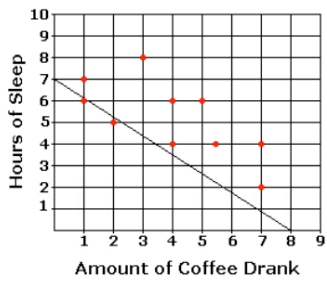
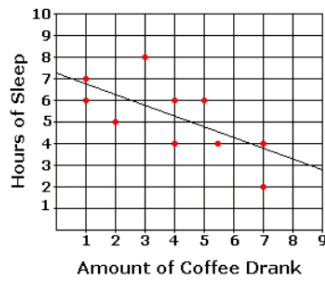
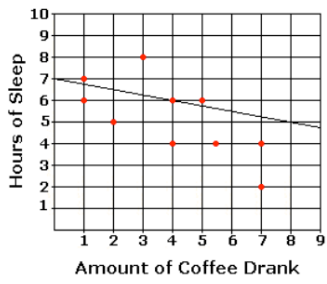
Which of the following equations represents the line that is drawn above?

- A. $y = 0.72x - 1.4$
- B. $y = 0.72x + 1.4$
- C. $y = -0.72x + 1.4$
- D. $y = -0.72x - 1.4$

7. If there is no correlation between the weight of an animal and its top speed, then it could be concluded that:

- A. on average, an animal's weight has nothing to do with its top speed.
- B. on average, the more an animal weighs, the higher its top speed will be.
- C. on average, the more an animal weighs, the lower its top speed will be.
- D. on average, the less an animal weighs, the higher its top speed will be.

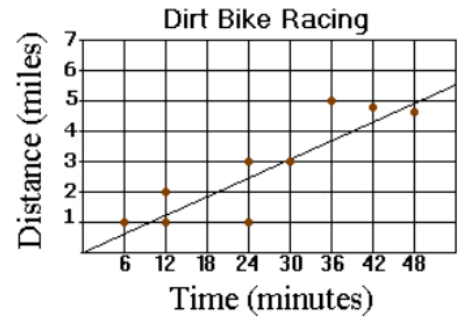
8. Which scatter plot below has the best line of best fit?



- A. W
- B. X
- C. Y
- D. Z

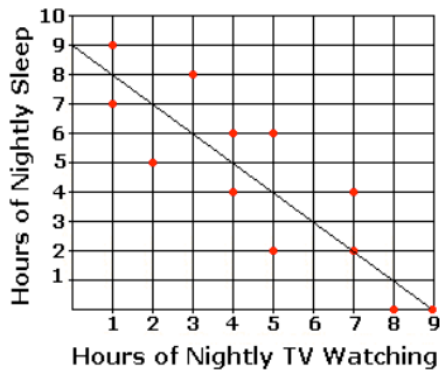
9. Below is a graph created for a dirt bike salesman after test riding several bikes.

What is the slope of the line of best fit?



- A. 6 miles per hour
- B. 12 miles per hour
- C. $1/6$ miles per hour
- D. 3 miles per hour

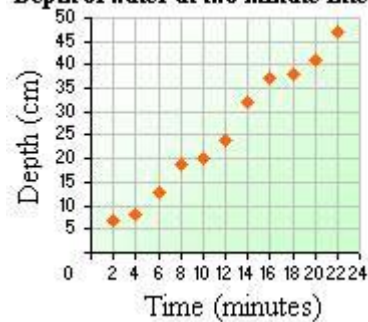
10. Write the equation for the line of best fit for the scatter plot below.



- A. $y = -3/4x + 9$
- B. $y = -x + 9$
- C. $y = -1/2x + 9$
- D. $y = -5/4x + 9$

11) a) Create your own line of best fit for this scatter plot.

Depth of water at two-minute intervals



b) Write an equation for the line of best fit you drew.

c) Use your equation to estimate the depth of water after 60 minutes.