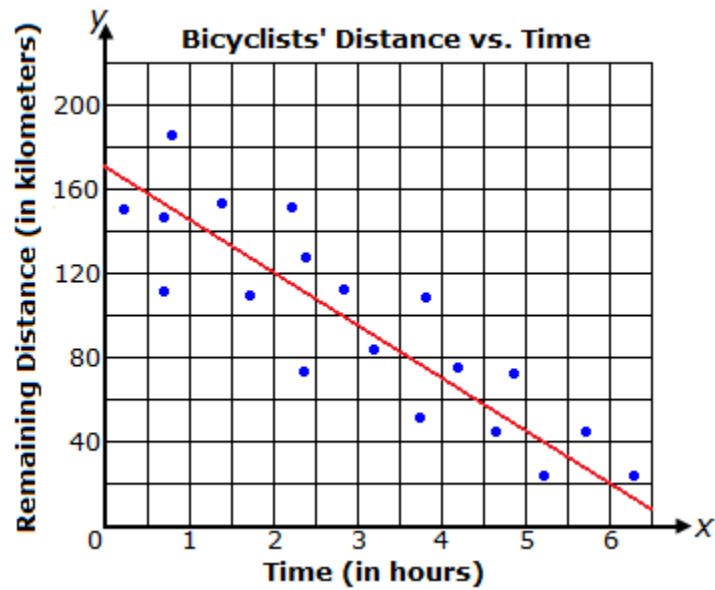# Lines Of Best Fit Worksheet
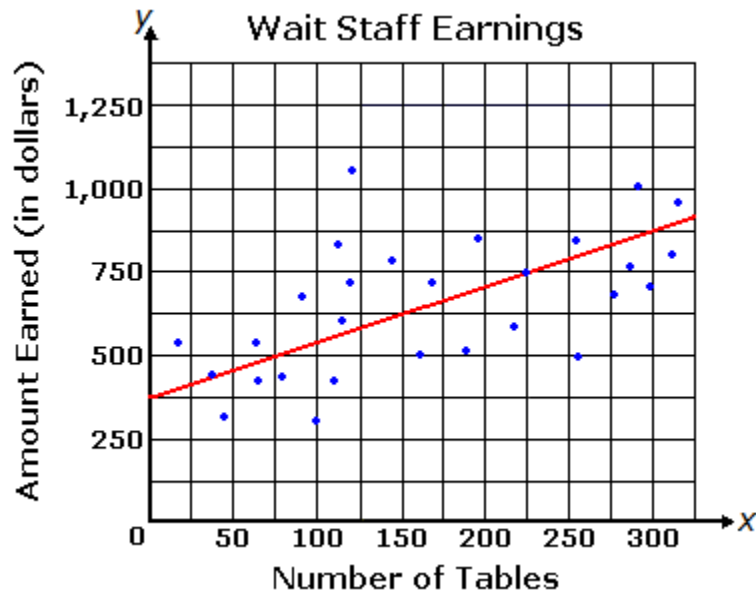
1.

The graph above shows a line of best fit for data collected on the distance bicyclists have remaining in relation to the amount of time they have been riding. What is the equation of the line of best fit?

- A. $y = -25x + 170$

- B. $y = 25x + 170$

- C. $y = -\frac{5}{8}x + 170$

- D. $y = \frac{5}{8}x + 170$

2.

Wait Staff Earnings

The graph above shows a line of best fit for data collected on the amount earned by waiters and waitresses last week in relation to the number of tables they served. What is the equation of the line of best fit?

A. $y = \frac{5}{3}x + 375$

B. $y = \frac{1}{3}x + 475$

C. $y = \frac{5}{3}x + 3$

D. $y = \frac{1}{3}x + 375$

3. A small theme park is trying to determine the number of guests they should expect on a weekend, based on the temperature outside.

Theme Park Attendance
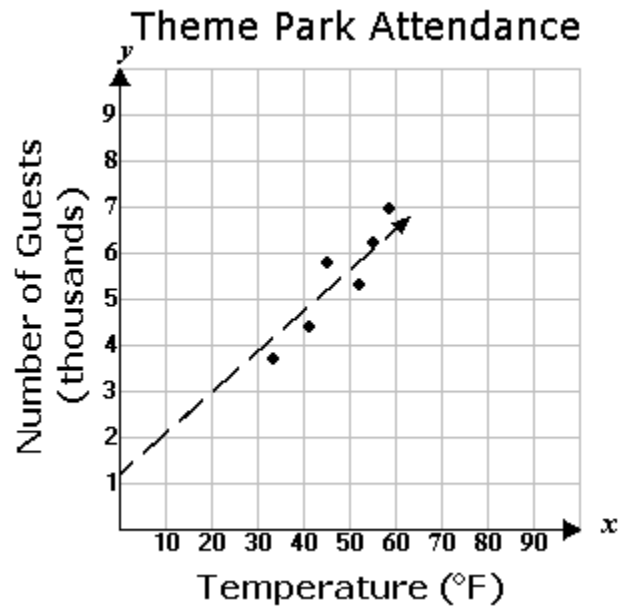
Based on the trend line, about how many guests should be expected if the temperature is around 80°?

○ **A.** 8,300
○ **B.** 8
○ **C.** 7,300
○ **D.** 9,300

4. A group of students did an experiment to see how drinking cups of coffee right before bed affected sleep. The results are shown below in the scatter plot with a line of best fit.

Hours of Sleep per Cups of Coffee
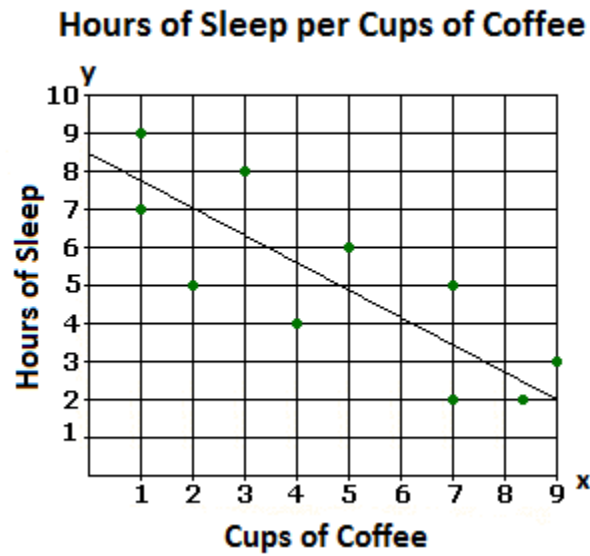
Use the given line of best fit to approximate the rate of change relative to the scatter plot above.

○ **A.** $\dfrac{7}{5} \dfrac{hours}{cup}$

○ **B.** $\dfrac{5}{7} \dfrac{hour}{cup}$

○ **C.** $-\dfrac{7}{5} \dfrac{hours}{cup}$

○ **D.** $-\dfrac{5}{7} \dfrac{hour}{cup}$
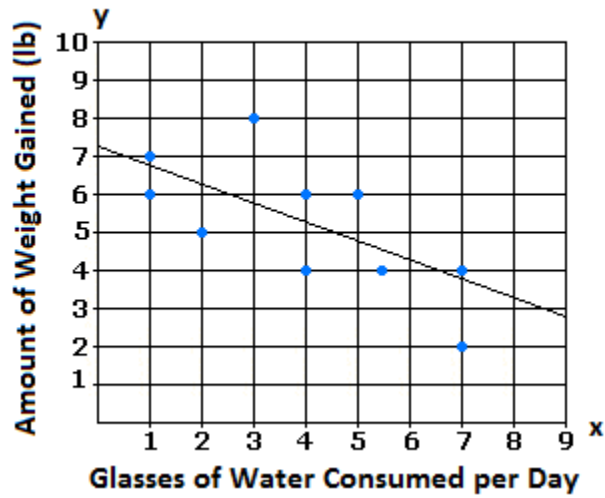
5.
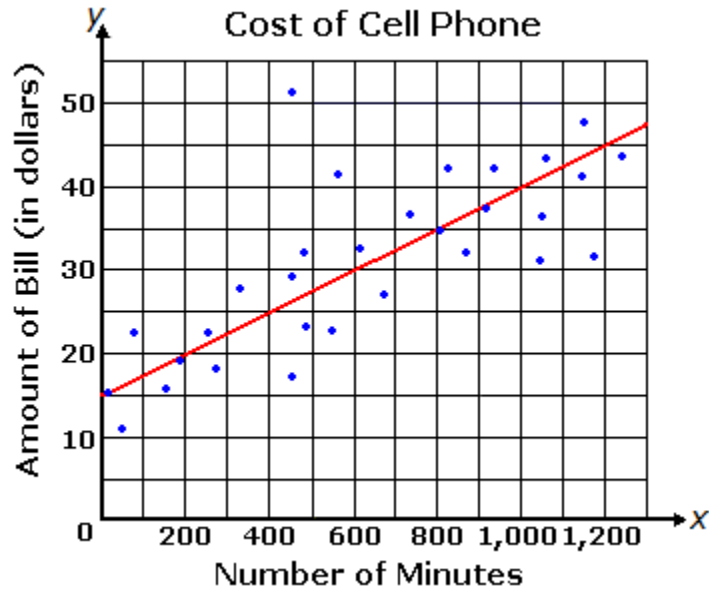
Cost of Cell Phone

The graph above shows a line of best fit for data collected on the amounts of cell phone bills in relation to the number of minutes used. What is the equation of the line of best fit?

○ **A.** $y = \frac{1}{2}x + 3$

○ **B.** $y = \frac{1}{2}x + 15$

○ **C.** $y = \frac{1}{40}x$

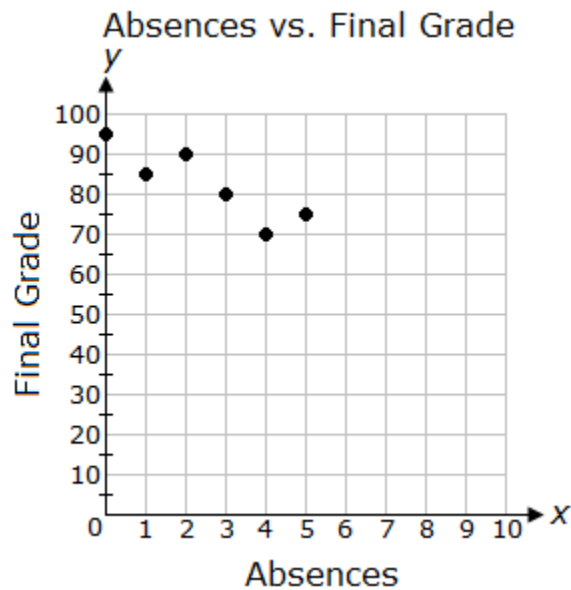○ **D.** $y = \frac{1}{40}x + 15$

6.

Weight Gain According to Water Consumption

Looking at the graph above showing a line of best fit, what is the correlation between the x and y variables?

○ **A.** y increases as x increases

○ **B.** y is constant

○ **C.** y decreases as x decreases

○ **D.** y decreases as x increases

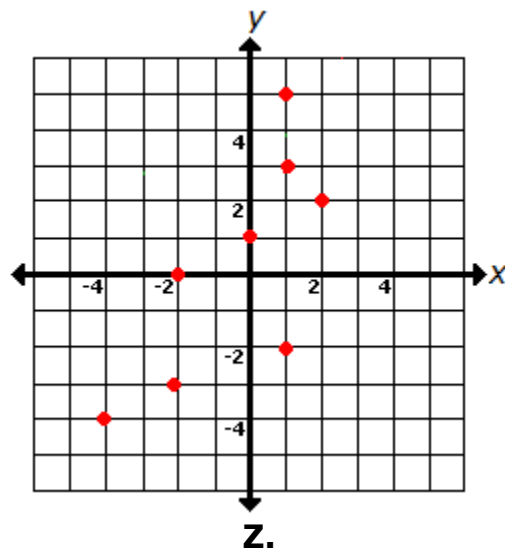**7.** A teacher made the following graph showing absences vs. final grades.

Absences vs. Final Grade

Predict the grade of a student that has 7 absences.

○ **A.** 50

○ **B.** 45

○ **C.** 70

○ **D.** 60

8. Which scatterplot most likely has a line of best fit represented by $y = -2x + 1$?

W.

X.

Y.

Z.

○ **A.** X

○ **B.** Z
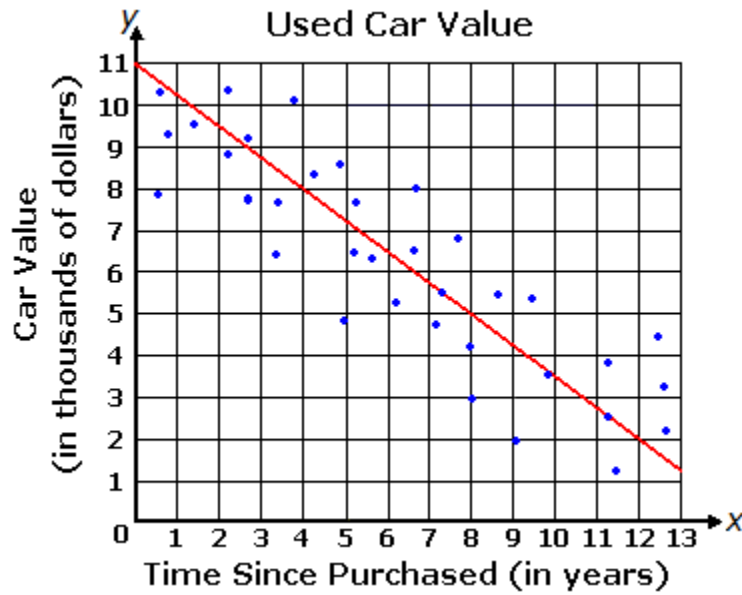
○ **C.** Y

○ **D.** W

9.

Lawn Service Income
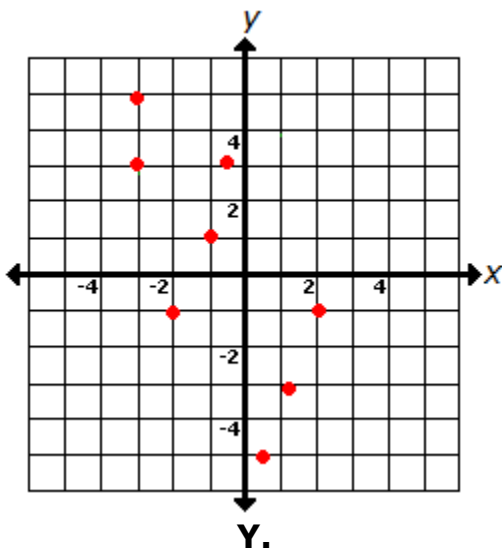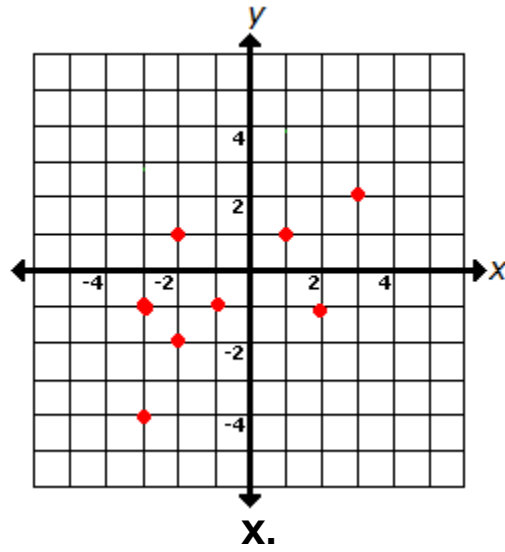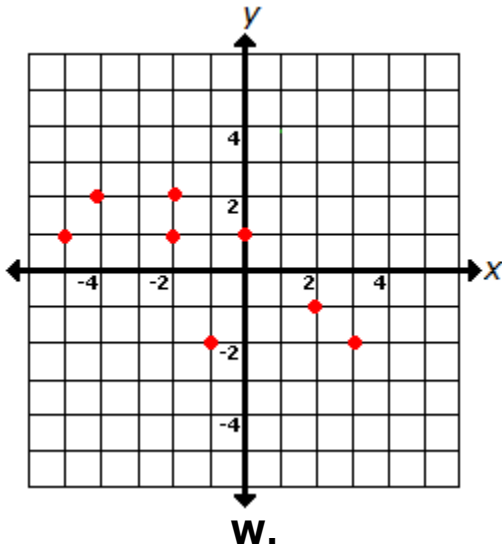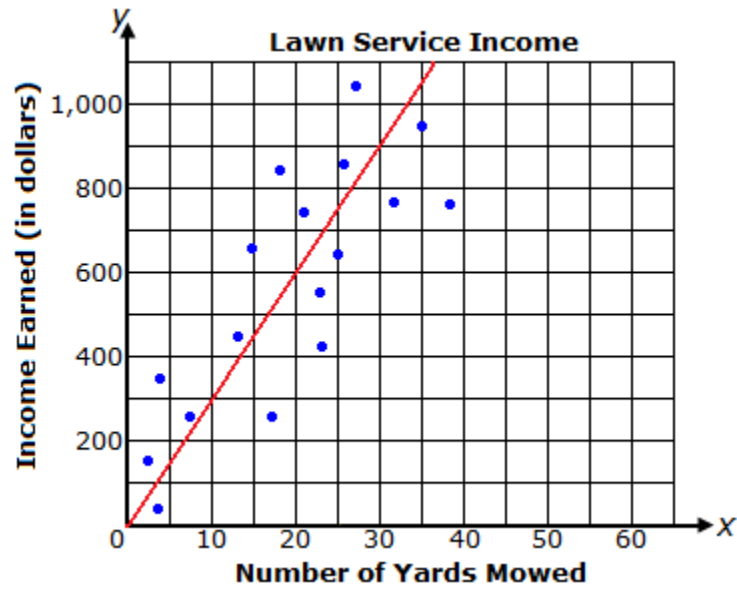
The graph above shows a line of best fit for data collected on the amount of income earned by lawn companies in relation to the number of yards mowed. What is the equation of the line of best fit?

A. $y = \frac{3}{2}x$

B. $y = 30x$

C. $y = 30x + 300$

D. $y = \frac{3}{2}x + 300$

10.

The graph above shows a line of best fit for data collected on the value of used cars in relation to the number of years since they were purchased. What is the equation of the line of best fit?

A. $y = 750x + 9,500$

B. $y = -750x + 11,000$

C. $y = \frac{3}{4}x + 11$

D. $y = -\frac{3}{4}x + 11,000$

11. Mrs. Moises, the school counselor, keeps a candy jar in her office for students. During one week, she kept count of how many students came to visit her and the number of candies in the jar, as shown in the scatter plot below.

Candy Jar
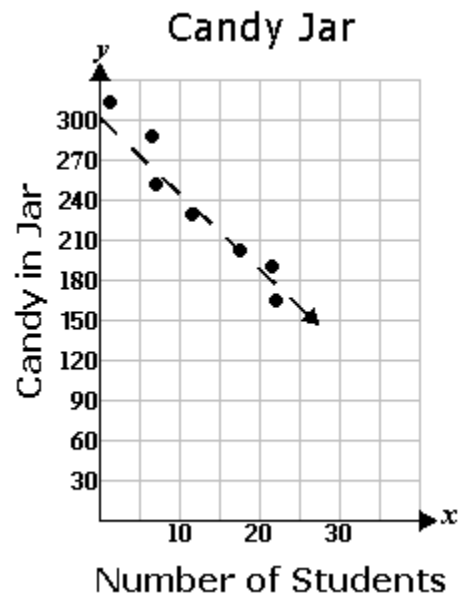
Based on the trend line, what is the best prediction for the number of candies in the jar when 30 students visit her?

○ **A.** 90
○ **B.** 180
○ **C.** 135
○ **D.** 150

12.
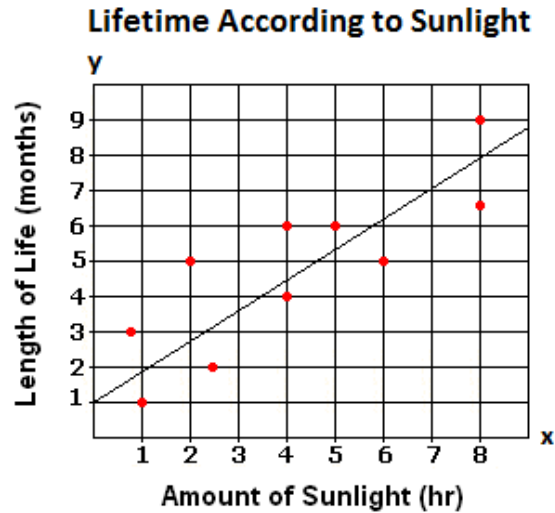
Lifetime According to Sunlight

Looking at the graph above showing a line of best fit, what is the correlation between the *x* and *y* variables?
- ○ **A.** *y* is constant
- ○ **B.** *y* increases as *x* increases
- ○ **C.** *y* increases as *x* decreases
- ○ **D.** *y* decreases as *x* increases

13. The graph below shows a line of best fit for data collected on the amount of time teenagers spend on the computer and watching television.
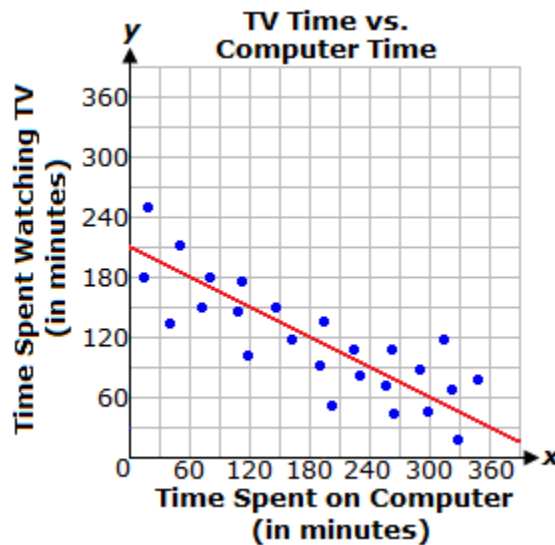
Based on the line of best fit, how much time does a teenager spend watching television if they spend 120 minutes on the computer?
- ○ **A.** 150 minutes
- ○ **B.** 135 minutes
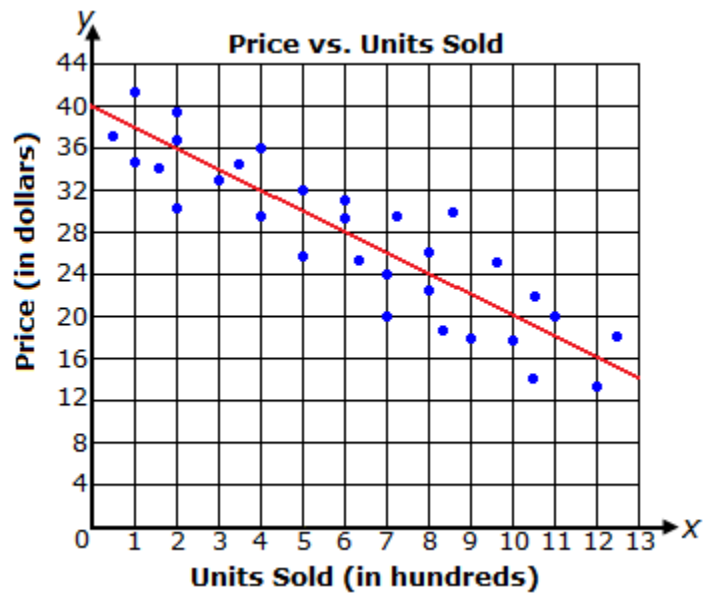- ○ **C.** 165 minutes
- ○ **D.** 180 minutes

14. A teacher made the following graph showing the number of hours that a student studied for an exam versus their exam grade.

Exam Data
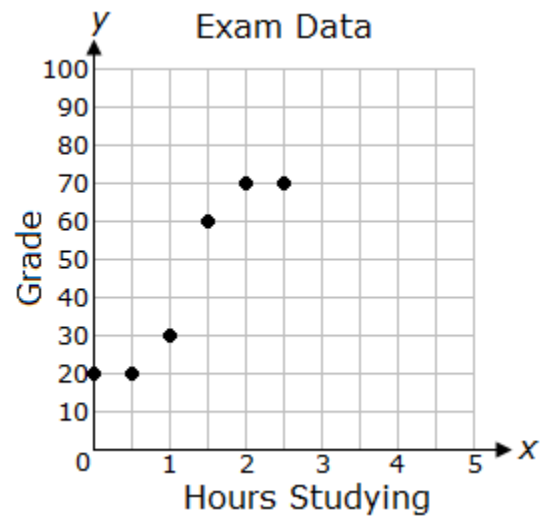
Predict the grade of a student if they studied for 3.5 hours.

○ **A.** 80

○ **B.** 100

○ **C.** 95

○ **D.** 90

15.

Price vs. Units Sold

The graph above shows a line of best fit for data collected on the price of a unit in relation to the number of units sold. What is the equation of the line of best fit?

○ **A.** $y = -\frac{1}{2}x + 10$

○ **B.** $y = -\frac{1}{50}x + 40$

○ **C.** $y = -\frac{1}{2}x + 40$

○ **D.** $y = -\frac{1}{50}x + 10$