1. The graph below shows a line of best fit for data collected on the number of medium pizzas sold at local pizza shops and the amount of money earned in sales.



Based on the line of best fit, how many pizzas were sold if \$260.00 was earned in sales?

- O A. 120
- B. 160
- O C. 80
- O D. 40

2. A researcher made the following graph showing the number of hours per day that people spend on the computer versus the number of pounds that they are overweight.



Predict the number of pounds overweight someone would be if they spent 8 hours per day using a computer.

- A. 50
- O B. 45
- O C. 60
- O D. 30

3. 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. 7 hours

• A. $-\frac{7}{5} \frac{\text{hours}}{\text{cup}}$ • B. $\frac{5}{7} \frac{\text{hour}}{\text{cup}}$ • C. $-\frac{5}{7} \frac{\text{hour}}{\text{cup}}$ • D. $\frac{7}{5} \frac{\text{hours}}{\text{cup}}$

4.



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. $y = \frac{5}{8}x + 170$ • B. y = 25x + 170• C. y = -25x + 170• D. $y = -\frac{5}{8}x + 170$

5. The graph below shows a line of best fit for data collected on the age of a car and the overall mileage of the car.



Based on the line of best fit, what is the mileage of a 9-year-old car?

- A. 67,500 miles
- O B. 180,000 miles
- C. 135,000 miles
- O D. 90,000 miles

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



Based on the trend line, about how many guests should be expected if the temperature is around 90°?

- O A. 9,900
- <u>O</u> B. 9
- O C. 8,200
- O D. 9,200

7. The graph below shows a line of best fit for data collected on the number of medium pizzas sold at local pizza shops and the amount of money earned in sales.



Based on the line of best fit, how many pizzas were sold if \$97.50 was earned in sales?

- A. 15
- O B. 30
- C.45
- O D. 60

8.



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?

- \bigcirc A. *y* decreases as *x* decreases
- O B. J is constant
- C. y decreases as x increases
- O D. y increases as x increases





The graph above shows a line of best fit for data collected on the amount of water bills in relation to the number of gallons of water used. What is the equation of the line of best fit?

• A. $y = \frac{1}{4}x + \frac{49}{4}$ • B. $y = -\frac{1}{4}x + \frac{49}{4}$ • C. $y = \frac{7}{4,000}x + \frac{49}{4}$ • D. $y = -\frac{7}{4,000}x + \frac{49}{4}$ Name: _____

10.

Midterm	49	53	67	71	74	78	83	85	91	99
Final	61	47	72	76	68	77	81	79	93	99

The table above lists the midterm and final examination scores for 10 students in an Algebra course. The graph below shows a line of best fit for the data. What is the equation of the line of best fit?





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



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

- O A. 80
- OB. 95
- **○ C**. 90
- O D. 100



- A. W
- <u>○</u> B. Y
- C. X
- D. Z

Name: 13.



The graph above shows a line of best fit for data collected on the output of factories in relation to the number of production hours. What is the equation of the line of best fit?

• A. $y = \frac{2}{3}x$ • B. $y = -\frac{2,000}{3}x + 4,000$ • C. $y = \frac{2,000}{3}x$ • D. $y = -\frac{2}{3}x + 1,998$

14. 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 240 minutes on the computer?

- A. 105 minutes
- O B. 120 minutes
- C. 90 minutes
- O D. 75 minutes

Name: 15.

Time it Takes Jeremy to Clean up Toys



Jeremy has to clean up his little brother's toys. He graphed how many minutes it took him to clean up and how many toys his little brother got out. What is the equation of the line of best fit above?

• A. $y = -\frac{3}{4}x + 1$ • B. $y = \frac{3}{4}x + 1$ • C. $y = \frac{3}{20}x + 1$ • D. $y = -\frac{3}{20}x + 1$

16. Petunia has a vegetable garden and has collected data about the amount of rain received and how high her tomato plant is growing. She displayed the information as graphed below.



Based on the trend line, how tall should her tomato plant grow if there is 11 cm of rain?

- A. 11 cm
- 🔿 B. 8 cm
- 🔿 C. 9 cm
- 🔾 D. 10 cm

17. Crystal's grandmother planted a tree on the farm in 1920. She measured the tree trunk's diameter every 10 years and recorded the measurements. The scatter plot below shows the progress of the diameter. (The year 1930 is equivalent to 10 on the graph.)



Looking at the line of best fit equation shown below the graph, what will be the approximate diameter of the tree in 2010?

- O A. 46.103 in
- O B. 45.63 in
- C. 51.173 in
- O D. 56.243 in

Name: 18.

Number of Snow Cones Sold



Maximum Daily Temperature (°F)

The graph above shows a line of best fit for data collected on the number of snow cones sold as a function of the maximum daily temperatures. What is the equation of the line of best fit?

• A. $y = -\frac{4}{5}x$ • B. $y = -\frac{3}{5}x + 10$ • C. $y = \frac{4}{3}x + 10$ • D. $y = \frac{5}{7}x + 10$ Name: 19.



Jessica graphed how long it took a cube of ice to melt at certain temperatures. What is the equation of the line of best fit above?

• A. $y = \frac{7}{12}x + 8$ • B. $y = \frac{7}{12}x - 8$ • C. $y = -\frac{7}{12}x + 8$ • D. $y = -\frac{7}{12}x - 8$

20. The local animal shelter showed commercials about adopting pets on one of the local television stations. The scatter plot below shows the number of pet adoptions and the number of commercials aired over a one week period.



Based on the trend line, which is the expected number of adoptions if seven commercials aired? \bigcirc A. 60

O B. 55

○ C. 50

O D. 40

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



Predict the grade of a student that has 7 absences.

- O A. 60
- B. 50
- C. 70
- O D. 45

Name: 22.



A science class graphed windchill and wind speed for every day in November. What is the equation of the line of best fit above?

- \bigcirc A. *y* = *x* + 55
- \bigcirc B. *y* = -*x* + 55
- \bigcirc C. y = -5x + 55
- \bigcirc D. *y* = 5*x* + 55

23. The graph below shows a line of best fit for data collected on the age of a car and the overall mileage of the car.



Based on the line of best fit, what is the mileage of a 12-year-old car?

- O A. 225,000 miles
- O B. 90,000 miles
- C. 180,000 miles
- O D. 112,500 miles



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

Name: 25.



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. $y = -\frac{3}{4}x + 11,000$ • B. y = 750x + 9,500• C. y = -750x + 11,000• D. $y = \frac{3}{4}x + 11$