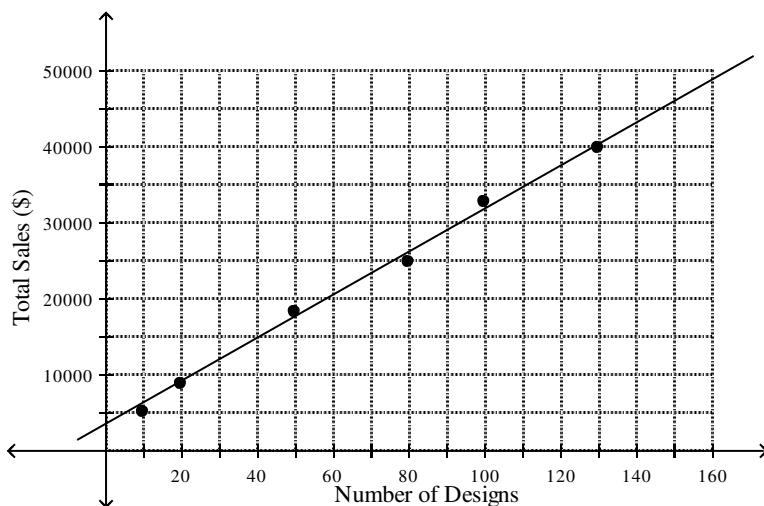


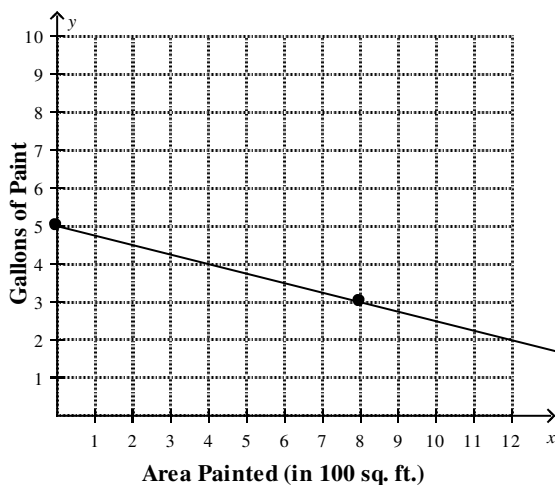
# Alg Mini MA912A311 Form A

- 1 The scatter plot shows the relationship between the weekly total sales (\$) and the number of different rug designs a rug store has. Based on this relationship, use the line of best fit to predict what the total sales will be when the store has 110 different rug designs.



- A. \$31,000  
B. \$0  
C. \$38,000  
D. \$35,000

- 2 Janell has 5 gallons of paint. After painting 800 square feet of walls in her house, she has 3 gallons left. The graph below shows Janell's situation.

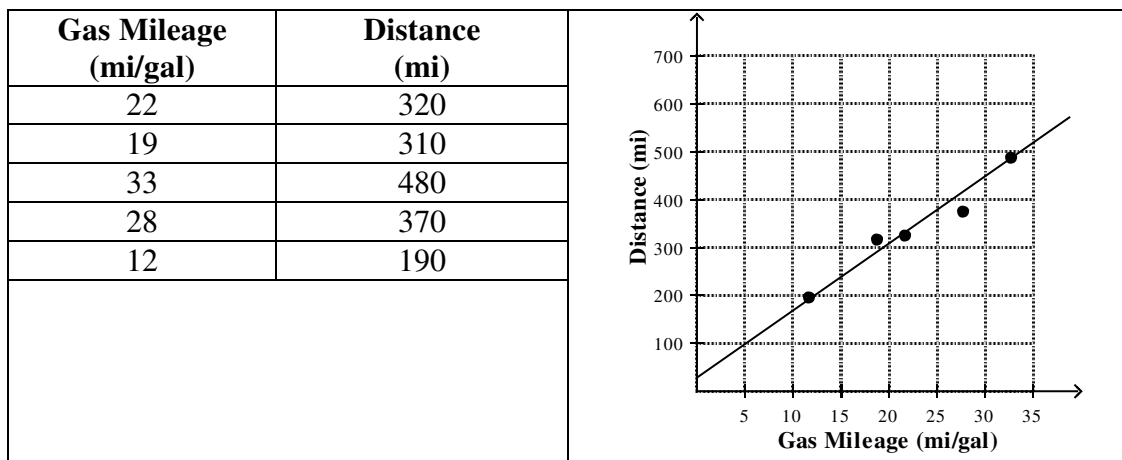


What is the equation of this linear function? What is the slope and what does it represent?

- F.  $y = -\frac{1}{400}x + 5$ ; slope =  $-\frac{1}{400}$ ; this means that for every gallon of paint used, 400 sq. ft. of area is painted.

- G.  $y = -\frac{1}{40}x + 5$ ; slope =  $-\frac{1}{40}$ ; this means that for every gallon of paint used, 40 sq. ft. of area is painted.
- H.  $y = -\frac{1}{800}x + 5$ ; slope =  $-\frac{1}{800}$ ; this means that for every gallon of paint used, 800 sq. ft. of area is painted.
- I.  $y = -\frac{1}{4}x + 5$ ; slope =  $-\frac{1}{400}$ ; this means that for every gallon of paint used, 4 sq. ft. of area is painted.

- 3 The table compares the gas mileage of a car to the distance the car can travel on one tank of gas. A scatter plot of the data is also shown. For this line of best fit, predict what the gas mileage must be for a car to travel 250 miles.



- A. 15 mi/gal
- B. 17 mi/gal
- C. 19 mi/gal
- D. 20 mi/gal

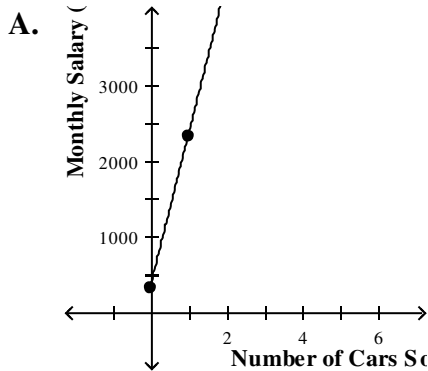
- 4 Which equation represents the data in the table?

|     |    |    |    |   |   |
|-----|----|----|----|---|---|
| $x$ | 1  | 2  | 3  | 4 | 5 |
| $y$ | -3 | -2 | -1 | 0 | 1 |

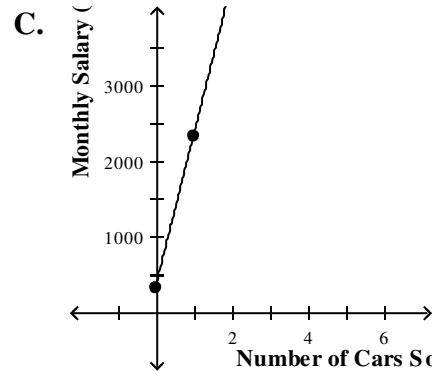
- F.  $y = 0.25x - 3$
- G.  $y = x - 3$
- H.  $y = x - 4$
- I.  $y = 4x - 4$

- 5 Thomas is a car salesman. The table shows the monthly salary that Thomas earns for the number of cars he sells. Use the data to graph the linear function. Write the equation of the line, identify the slope of the line and explain what the slope means.

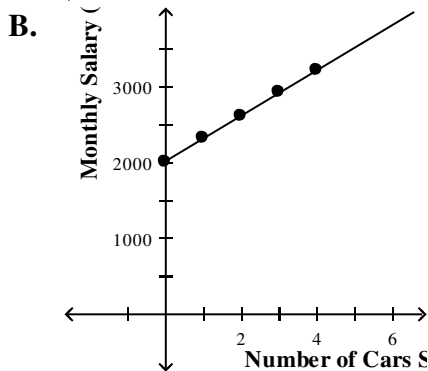
| Number of Cars Sold | Monthly Salary Earned |
|---------------------|-----------------------|
| 0                   | \$2000                |
| 1                   | \$2300                |
| 2                   | \$2600                |
| 3                   | \$2900                |
| 4                   | \$3200                |



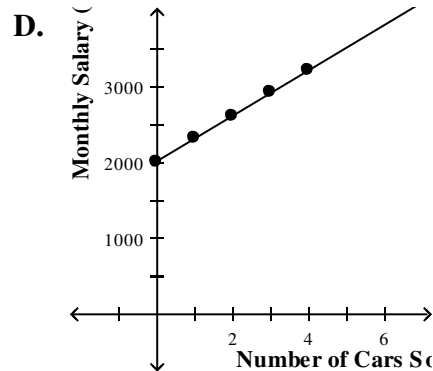
$y = 2000x + 300$ ; The slope of the line is 300. This means that for every car Thomas sells, he earns an additional \$300.



$y = 2000x + 300$ ; The slope of the line is 2000. This means that for every car Thomas sells, he earns \$2000.



$y = 300x + 2000$ ; The slope of the line is 300. This means that for every car Thomas sells, he earns an additional \$300.



$y = 300x + 2000$ ; The slope of the line is 2000. This means that for every car Thomas sells, he earns \$2000.

**Alg Mini MA912A311 Form A**  
**Answer Section**

|   |        |        |                    |
|---|--------|--------|--------------------|
| 1 | ANS: D | PTS: 1 | STA: MA.912.A.3.11 |
| 2 | ANS: F | PTS: 1 | STA: MA.912.A.3.11 |
| 3 | ANS: B | PTS: 1 | STA: MA.912.A.3.11 |
| 4 | ANS: H | PTS: 1 | STA: MA.912.A.3.11 |
| 5 | ANS: B | PTS: 1 | STA: MA.912.A.3.11 |