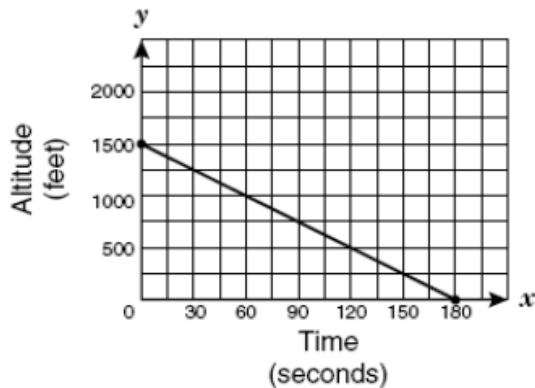


Algebra 1 EOC Review
Reporting Category 3 Assignment

Name _____ Per _____
Date _____

1. The line segment on the graph shows the altitude of a landing airplane from the time its wheels are lowered to the time it touches the ground. Which of the following best describes the slope of the line segment?



- F. The plane descends about 1 foot per 8 seconds.
G. The plane descends about 8 feet per second.
H. The plane descends about 1 foot per 2 seconds.
J. The plane descends about 2 feet per second.
2. Which equation generates a graph containing the set of ordered pairs shown below?

$\{(-15, 12), (-5, 8), (5, 4), (10, 2)\}$

- F. $y = -\frac{3}{5}x + 3$
G. $y = -\frac{2}{5}x + 6$
H. $y = -\frac{1}{5}x + 9$
J. $y = -\frac{4}{5}x$

3. The algebraic form of a linear function is $d = \frac{1}{4}l$, where d is the distance in miles and l is the number of laps. Which of the following choices identifies the same linear function?

- F. For every 4 laps on the track, an athlete runs 1 mile.
G. For every lap on the track, an athlete runs $\frac{1}{8}$ mile.

H.

l	d
0	0
2	$\frac{1}{2}$
4	$\frac{1}{4}$

J.

l	d
$\frac{1}{4}$	1
1	4
4	16

4. If $(2k, k)$ and $(3k, 4k)$ are two points on the graph of a line and k is not equal to 0, what is the slope of the line?

- A. 3
B. $3k$
C. $\frac{1}{3}$
D. Not here

5. Which equation represents the line that passes through the points $(-1, 4)$ and $(3, 2)$?

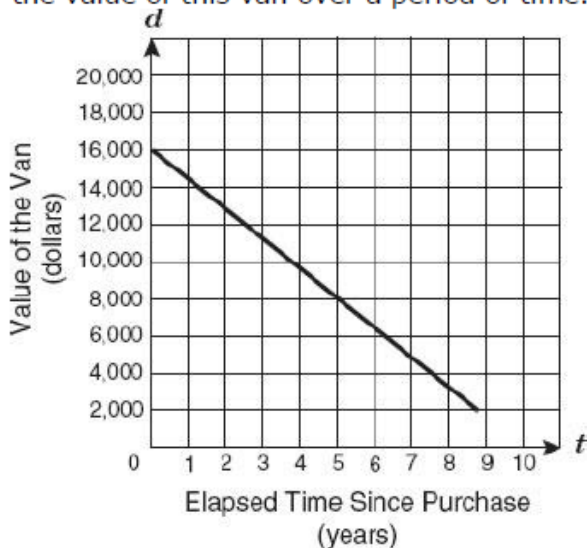
- F. $y = -\frac{1}{2}x + \frac{7}{2}$
G. $y = -\frac{1}{2}x + \frac{9}{2}$
H. $y = -2x + 7$
J. $y = -2x + 3$

Algebra 1 EOC Review
Reporting Category 3 Assignment

Name _____ Per _____
Date _____

6. Which of the following is not a correct description of the graph of the function $y = -2x - 7$?
- A. The graph of the function contains the point $(-2, -3)$, and when the value of x increases by 1 unit, the value of y decreases by 2 units.
 - B. The graph of the function contains the points $(-1, -5)$, $(2, -11)$, and $(4, -15)$.
 - C. The graph of the function is a line that passes through the point $(0, -7)$ with a slope of -2 .
 - D. The graph of the function contains the points $(0, -7)$, $(1, -9)$, and $(3, -1)$.

7. A small business purchased a van to handle its delivery orders. The graph below shows the value of this van over a period of time.



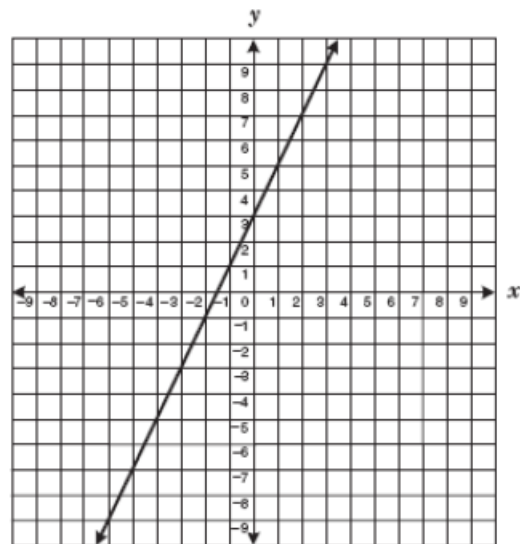
Which of the following best describes this situation?

- A. The van was purchased for \$1,600.
- B. The van decreases in value by \$1,600 per year.
- C. The van increases in value by \$1,600 per year.
- D. The van has no value after 5 years.

8. The cost of renting a car for 1 day at Cars Plus is \$20 plus 10 cents per mile driven. The cost of renting a car for 1 day at Need-A-Car is \$20 plus 15 cents per mile driven. In a graph of the cost of a car rental, what does the cost per mile driven represent?

- F. The x -intercept
- G. The y -intercept
- H. The slope
- J. The point of intersection

9. The graph of a line is shown below.



If the slope of this line is multiplied by -1 and the y -intercept decreases by 2 units, which linear equation represents these changes?

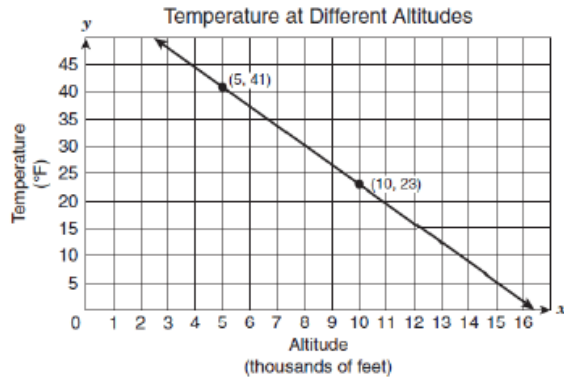
- A. $y = -2x + 1$
- B. $y = -x + 1$
- C. $y = -x - 1$
- D. $y = -\frac{1}{2}x - 1$

Algebra 1 EOC Review
Reporting Category 3 Assignment

Name _____ Per _____

Date _____

10. Scientists developed the linear model below to show the relationship between altitude, or elevation above sea level (0 feet), and air temperature.



According to the model, what would be the air temperature at an altitude of 0 feet?

- F. 16°F
G. 45°F
H. 59°F
J. 77°F
11. The amount an appliance repairman charges for each job is represented by the function $t = 50h + 35$, where h represents the number of hours he spent on the job and t represents the total amount he charges in dollars for the job. The repairman plans to change the amount he charges for each job. The amount he plans to charge is represented by the function $t = 50h + 45$. What will be the effect of this change on the amount he charges for each job?
- F. The total amount he charges for each job will increase by \$10.
G. The total amount he charges for each job will decrease by \$10.
H. The amount he charges per hour will increase by \$10.
J. The amount he charges per hour will decrease by \$10.
12. If y varies directly with x and y is 14 when x is 6, which of the following represents this situation?
- F. $y = 20x$
G. $y = \frac{7}{3}x$
H. $y = 8x$
J. $y = \frac{3}{7}x$

13. Tyler wants to buy a video-game system for \$375. He can pay for the system in 12 months if he pays \$75 now and \$25 each month. How will the number of monthly payments be affected if Tyler pays \$75 now and \$30 each month?

- A. He will make 10 fewer monthly payments.
B. He will make 2 fewer monthly payments.
C. He will make 3 fewer monthly payments.
D. He will make 5 fewer monthly payments.

14. A car rental agency charges a fee of \$25 per day to rent a compact car plus \$0.15 per mile driven. If the car is driven x miles in 1 day, the equation $y = 0.15x + 25$ can be used to find the total charges for a 1-day compact-car rental. If the rental agency reduces the fee for renting a compact car by 5% and increases the rate per mile driven by \$0.05, which equation can be used to determine the new cost of renting a compact car for 1 day and driving x miles?

- F. $y = 0.10x + 26.25$
G. $y = 0.20x + 26.25$
H. $y = 0.10x + 23.75$
J. $y = 0.20x + 23.75$

15. A company rents cars.

- It charges \$0.15 for each mile that the car is driven.
- It adds a \$25 fee for each day that the car is rented.
- The equation $y = 0.15x + 25$ can be used to find the total cost of renting a car for 1 day.

If the company increases the rate per mile driven by \$0.05, which equation can be used to find the new rental cost for 1 day?

- A. $y = 0.20x + 25.05$
B. $y = 0.10x + 24.95$
C. $y = 0.20x + 25.00$