

Algebra 1 STAAR EOC Review #6

Reporting Category 3: Linear Functions

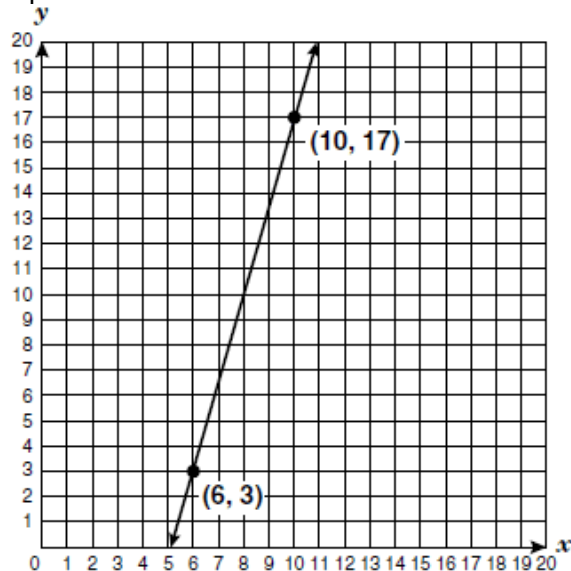
A.6efg

RC 3 A.06E

1. What is the y -intercept of the function $f(x) = 3(x - 2)$?

- A. 3
- B. 1
- C. -2
- D. -6

2. What is the y -intercept of the function graphed below?



- F. 24
- G. -21
- H. -18
- J. -9

3. What are the coordinates of the x -intercept of the equation $-3y = 8 - 2x$?

- A. (-2, 0)
- B. $(0, -\frac{8}{3})$
- C. $(\frac{2}{3}, 0)$
- D. (4, 0)

4. What are the coordinates of the y -intercept of the line represented by the equation $4x + 2y = 10$?

- F. (0, 2)
- G. $(0, \frac{5}{2})$
- H. (0, 5)
- J. (0, 10)

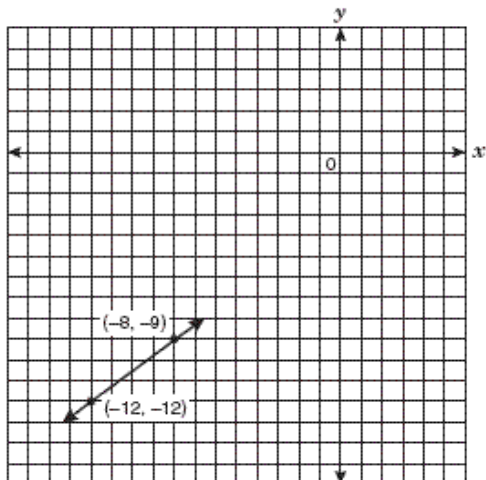
5. Find the x - and y -intercepts of $-4x + 7y = -28$.

- A. x -intercept: (-4, 0)
 y -intercept: (0, 7)
- B. x -intercept: (7, 0)
 y -intercept: (0, -4)
- C. x -intercept: (0, 7)
 y -intercept: (-4, 0)
- D. x -intercept: (0, -4)
 y -intercept: (7, 0)

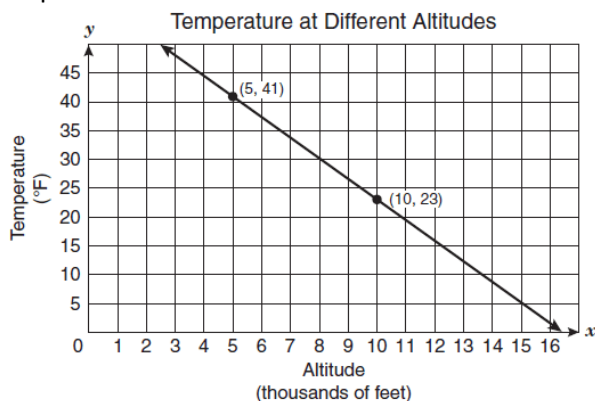
6. Find the points at which the graph of the equation $-4y = 15 - 5x$ crosses the x -axis and the y -axis.

- F. (0, -3.75) and (3, 0)
- G. (0, 3) and (0, -3.75)
- H. (-3.75, 0) and (0, 3)
- J. (3, 0) and (-3.75, 0)

7. What are the coordinates of the x -intercept of the function graphed below?



- A. $(4, 0)$
 B. $(-3, 0)$
 C. $(0, 4)$
 D. $(0, -3)$
8. Scientists developed the linear model below to show the relationship between altitude, or elevation above sea level (0 feet), and air temperature.

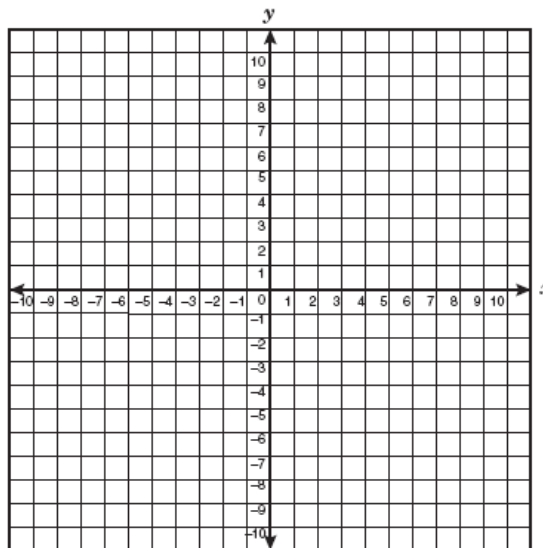


According to the model, what would be the air temperature at an altitude of 0 feet?

- F. 16°F
 G. 45°F
 H. 59°F
 J. 77°F

9. The table below shows ordered pairs of a linear function.

x	y
-6	-10
-3	-8
3	-4
6	-2



What are the x - and y -intercepts for the graph of this linear function?

- A. x -intercept: $(-6, 0)$
 y -intercept: $(0, 9)$
 B. x -intercept: $(0, -6)$
 y -intercept: $(9, 0)$
 C. x -intercept: $(0, 9)$
 y -intercept: $(-6, 0)$
 D. x -intercept: $(9, 0)$
 y -intercept: $(0, -6)$
10. Which of the following ordered pairs is the x -intercept or the y -intercept of the function $2x - y = 8$?
- F. $(8, 0)$
 G. $(0, 4)$
 H. $(4, 0)$
 J. $(0, 8)$

RC 3 A.06F

11. 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.

12. 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. $y = 0.20x + 23.75$

13. 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. $y = 0.20x + 25.00$

14. 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.

RC 3 A.06G

15. On a certain day the exchange rate of Mexican pesos for U.S. dollars was approximately 10 pesos for 1 dollar. If an exchange of 4,000 pesos was made that day, what was the approximate value of the exchange in dollars?

- A. \$40
- B. \$400
- C. \$4,000
- D. \$40,000

16. 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. $y = \frac{3}{7}x$

