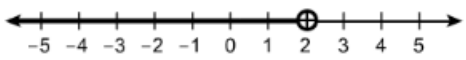
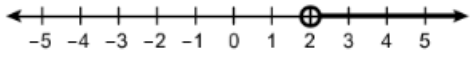
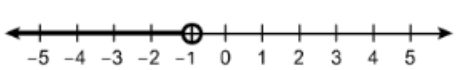
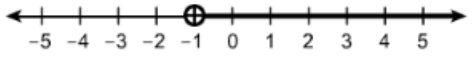
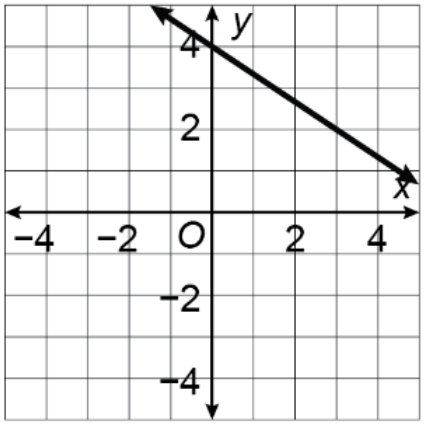
FCPS Algebra 1 Common Assessment 2 Name _____

Question Number	Snips of Questions
1	What is the value of x in this equation? $4(x + 6) - 3x = 26$ A. 20 B. 2 C. 50 D. 10
2	Choose the formula for h given the equation $A = \frac{1}{2}bh$. A. $h = \frac{4A}{b}$ B. $h = \frac{12A}{b}$ C. $h = \frac{6A}{b}$ D. $h = \frac{2A}{b}$
3	Graph the solution of the inequality on a number line. $2(x - 3) - 5x < x - 2$ A.  B.  C.  D. 

4

Which equation matches the graph?



- A. $y = 3x - 8$
- B. $y = -2x + 1$
- C. $y = -\frac{2}{3}x + 4$
- D. $y = 2x - 5$

5

Which of the following is an equation of the line through (11, –3) and (7, 9)?

- A. $y = -\frac{1}{3}x - \frac{20}{3}$
- B. $y = \frac{1}{3}x - \frac{20}{3}$
- C. $y = -3x + 30$
- D. $y = 3x - 12$

6

What is an equation in standard form of the line that has x-intercept 1 and y-intercept 4?

- A. $x - 4y = 4$
- B. $4x - y = 4$
- C. $4x + y = 4$
- D. $x - 4y = -4$

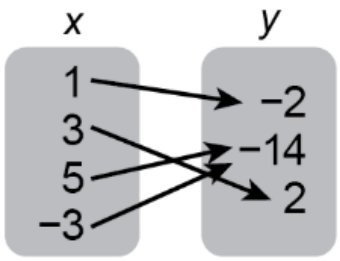
7

Which equation is the slope-intercept form of the line that passes through (12, 9) and is perpendicular to the graph of $y = -\frac{3}{4}x + 1$?

- A. $y = \frac{4}{3}x - 7$
- B. $y = -\frac{3}{4}x - 6$
- C. $y = \frac{4}{3}x - 5$
- D. $y = -\frac{4}{3}x + 18$

8

Complete the sentence about the relation.



The domain of the relation is Choose... and the range is Choose...

Choose...
{–3, 1, 3, 5}
{–1, 9, 16}
{–1, 2, 8, 9, 16, 30, 46}
{0, –1, 2, 8, 9, 16, 30, 46}
{2, 8, 30, 46}

Choose...
{2, 8, 30, 46}
{−14, −2, 2}
{–1, 9, 16}
{0, –1, 2, 8, 9, 16, 30, 46}
{–1, 2, 8, 9, 16, 30, 46}

9

Which of the following is an arithmetic sequence?

- A. 0, 3, 8, 15, 24, 35, ...
- B. 9, 4, –1, –6, –11, –16, ...
- C. 1, 3, 6, 10, 15, 21, ...
- D. –1, 0, 1, 0, 3, 0, ...

10

What is the solution of the system of equations?

$y = \frac{2}{3}x + 5$

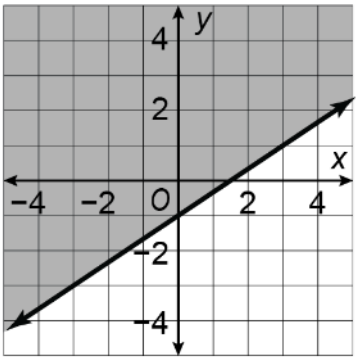
$7x - 3y = 15$

- A. (0, 5)
- B. $(2, \frac{19}{3})$
- C. $(4, \frac{23}{3})$
- D. (6, 9)

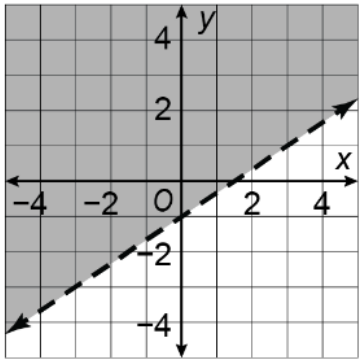
11

Choose the graph that matches the inequality $y > \frac{2}{3}x - 1$.

A.



C.



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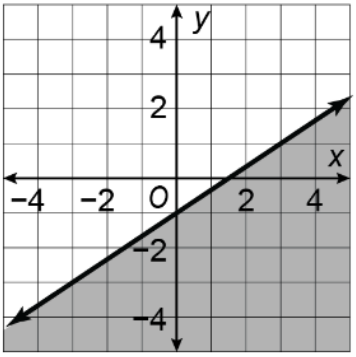
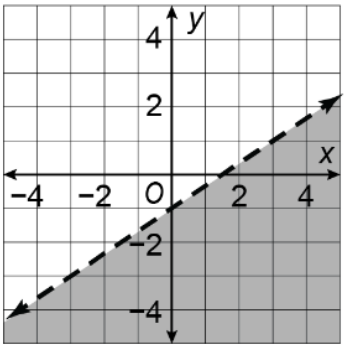


D.



12

Which relation is not a function?

A. (2, 9), (−1, −5), (1, 5), (5, 0), (12, 3)

B. (−3, 1), (6, 2), (8, 3), (6, 4), (3, 5)

C. (5, 1), (4, 2), (3, 3), (2, 4), (1, 5)

D. (7, 2), (5, 3), (3, 4), (1, 5), (−1, 6)

13

On Saturdays, Eve earns $14 per hour for yard work and an extra amount for dog walking. Look at the table. Choose the linear function *f* Eve can use to determine her pay.

Hours	1	2	3	4	5
Pay	26	40	54	68	82

A. $f(x) = x + 14$

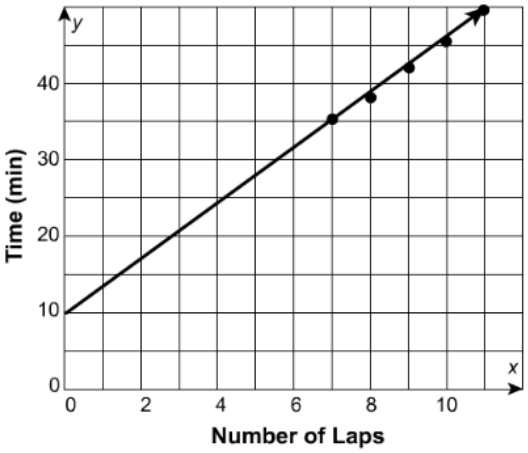
B. $f(x) = 12x + 16$

C. $f(x) = 12x + 14$

D. $f(x) = 14x + 12$

14

Which could be an equation of the trend line shown in the graph?

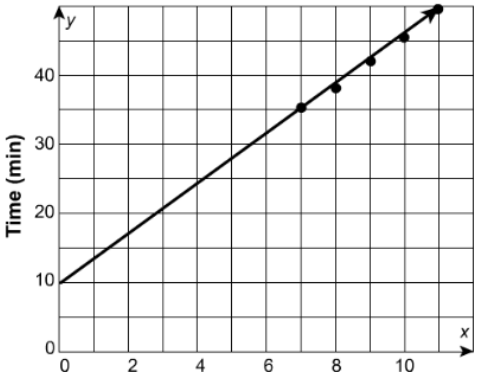


- A. $y = 3.5x + 12$
- B. $y = 3.5x + 10$
- C. $y = 4.5x + 11$
- D. $y = 4.5x + 9$

15

Each day, Hugo runs to the school track and then runs some laps.

Laps	7	8	9	10	11
Time (min)	35.5	37	41.5	45	49.5



What does the *y*-intercept of the line represent?

- A. total time spent running
- B. average time to run one lap
- C. average time spent running to the school track
- D. average number of laps run

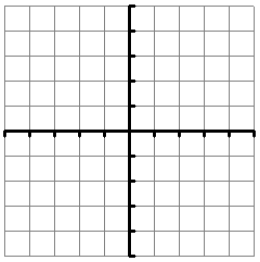
16

Solve the system by graphing. Write the solution as an ordered pair.

$y = -3x + 3$

$y = \frac{1}{2}x - 4$

solution = [ ]



Enter your answer as an ordered pair.

(x, y)

17

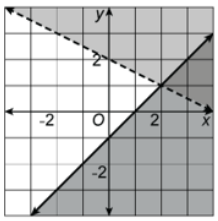
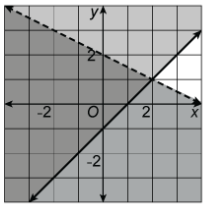
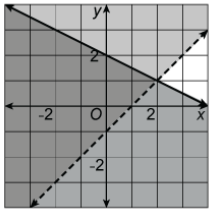
Choose the correct words from the drop-down menu to make a true statement about the system of equations.

$y = \frac{1}{3}x + 2$

$x - 3y = 6$

Using substitution, the system has [Choose... ▾] .

Choose...
no solution
infinitely many solutions
one solution

18	Find the solution to the system of equations. Write the solution as an ordered pair. $3x + 2y = -7$ $5x - 3y = 20$ solution =
19	The cost of 5 hats and 1 scarf is \$47. The cost of 2 hats and 2 scarves is \$40. How much does one hat cost? A. \$12.25 B. \$2.25 C. \$6.75 D. \$12.75
20	Choose the graph that matches the system of inequalities. $-x + y \geq -1$ $x + 2y < 4$ A.  B.  C.  D.