

NAME _____

DATE _____

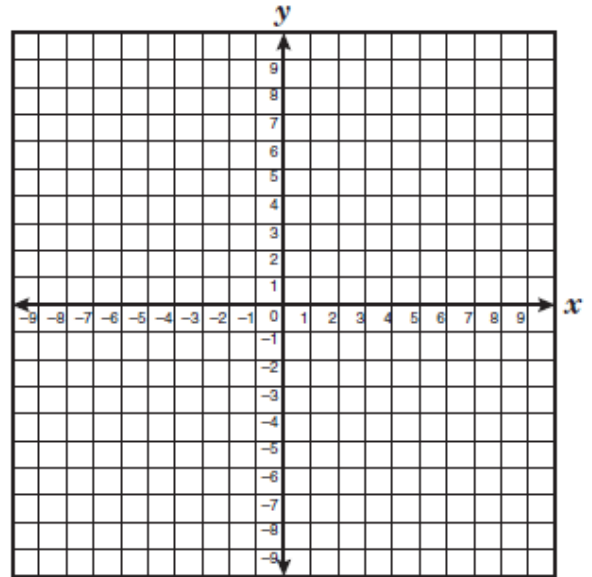
PER. _____

REVIEW: SYSTEMS OF EQUATIONS

1. Solve the system by graphing.

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

$$x + 2y = 10$$



Solution: _____

2. Solve the following system by graphing on the calculator. Sketch the graph.

Line 1:

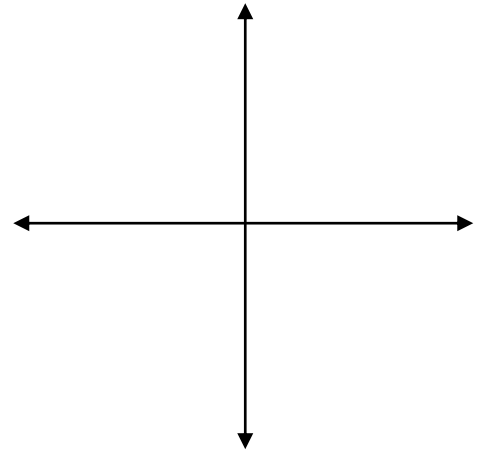
x	y
-3	10
-2	8
4	-4
6	-8

y1 = _____

Line 2:

x	y
-1	-12
1	-4
3	4
5	12

y2 = _____



Solution: _____

3. Solve the following system using a matrix.

$$5x - 9y = -3$$

$$4x - 3y = 6$$

Solution: _____

Set up a system of equations, then solve using a matrix.

4. At a pet store the total cost of 8 pounds of Brand X dog food and 1 pound of Brand Y dog food is \$8.40. The total cost of 16 pounds of Brand X dog food and 8 pounds of Brand Y dog food is \$24.00. What is the price per pound of Brand Y dog food?

Equations: _____

Solution: _____

5. A rectangle has a perimeter of 18 cm. Its length is 5 cm more than its width. Find the dimensions.

Equations: _____

Solution: _____

6. Jimmy had \$5.25 in nickels and quarters. He had 45 coins altogether. How many coins of each type did he have?

Equations: _____

Solution: _____

Answer the following.

_____ 7. Elizabeth met 24 of her cousins at a family reunion. The number of male cousins was 6 less than twice the number of female cousins. If m represented the number of male cousins and f the number of female cousins, which system of equations could be used to find how many male cousins Elizabeth met?

A. $m = 2f + 6$
 $m - f = 24$

C. $f = 2m + 6$
 $m - f = 24$

B. $m = 2f - 6$
 $m + f = 24$

D. $f = 2m - 6$
 $m + f = 24$

_____ 8. A math test has 25 problems. Some are worth 2 points, and some are worth 3 points. The test is worth 60 points total. If x represents the number of 2 point problems and y represents the number of 3 point problems, which system of equations could be used to find the number how many 3 point problems are on the test?

A. $x + y = 25$
 $3x + 2y = 60$

C. $x + y = 25$
 $2x + 3y = 60$

B. $x + y = 60$
 $3x + 2y = 25$

D. $x + y = 60$
 $2x + 3y = 25$

_____ 9. Kristi made 48 cookies. The number of chocolate chip cookies she made was 3 more than 3 times as many sugar cookies. Which system of equations can be used to find how many chocolate chip cookies, c , and sugar cookies, s , Kristi made?

A. $s + c = 48$
 $c = 3s + 3$

C. $s + c = 3$
 $c = 3s + 48$

B. $s - c = 48$
 $s = 3c + 3$

D. $s + c = 48$
 $c = 3s - 3$

_____ 10. What is the solution to the system of equations below?

$$\begin{aligned} 3x + 2y &= -6 \\ 6x + 4y &= -12 \end{aligned}$$

A. The ordered pair $(-\frac{1}{2}, 0)$ is the solution.

B. The ordered pair $(0, \frac{2}{7})$ is the solution.

C. There are an infinite number of solutions.

D. There is no solution.

11. Two lines have the given equations. At what point do they intersect?

$$2x - y = 1$$

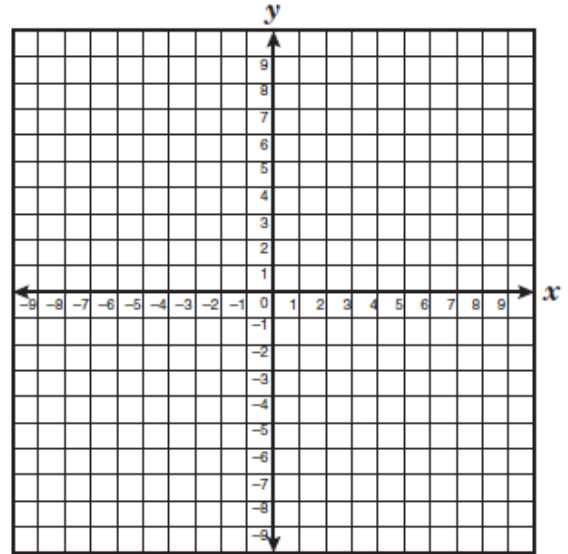
$$3x - y = -6$$

Solution: _____

12. Solve the system by graphing.

$$3x - y = -4$$

$$y = 3x + 4$$



Solution: _____

13. If $(x, 4)$ is the solution to the system of linear equations, what is the value of x ?

$$4x + 5y = 8$$

$$2x - 3y = -18$$

$x =$ _____

14. Some values for two linear equations are shown in the tables below.

Equation 1

x	y
-2	-4
2	-2
6	0
8	1

Equation 2

x	y
-5	5
-4	2
-2	-4
1	-13

What is the solution to the system of equations represented by these tables?

A. $(2, -2)$

C. $(-5, 5)$

B. $(-2, -4)$

D. $(-4, 2)$

15. What does it mean if $(4, 1)$ is a solution of the system given below?

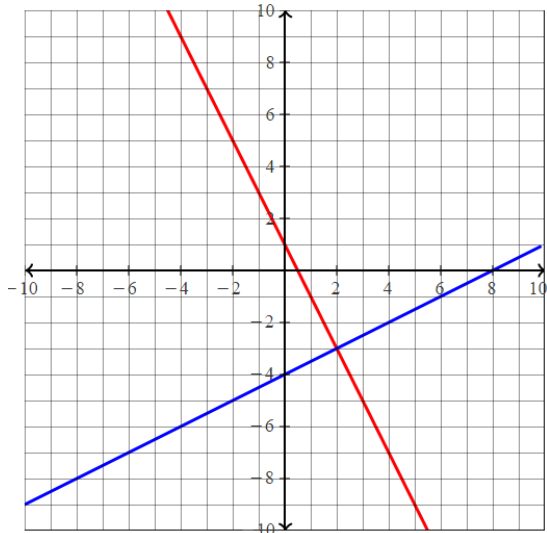
$$y = x - 3$$
$$y = -x + 5$$

- A. (4, 1) makes at least one of the equations true.
- B. (4, 1) makes both of the equations true.
- C. (4, 1) makes neither of the equations true.
- D. (4, 1) makes exactly one of the equations true.

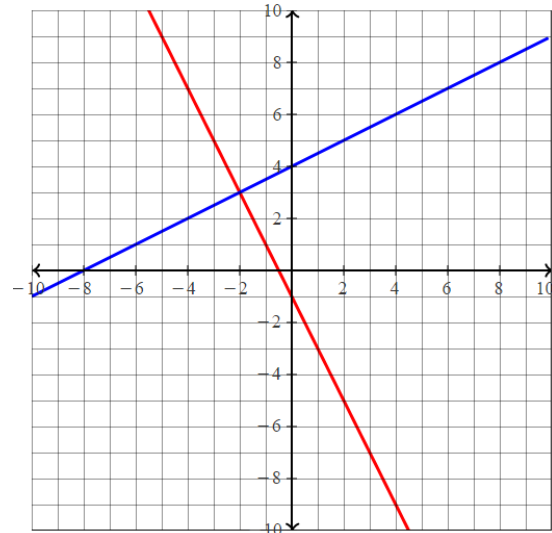
16. Which graph best represents a solution to this system of equations?

$$2x + y = -1$$
$$x - 2y = -8$$

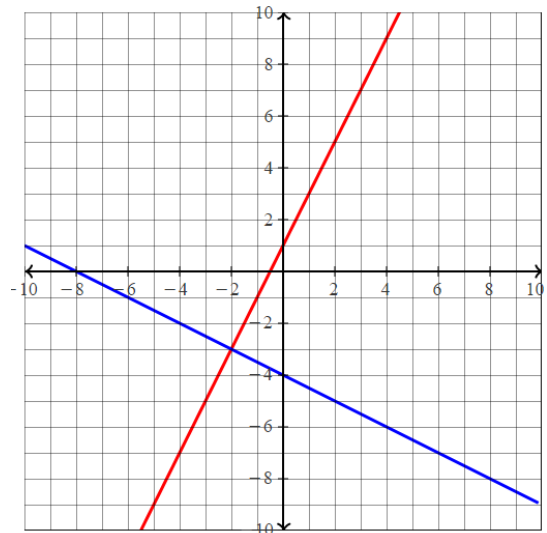
A.



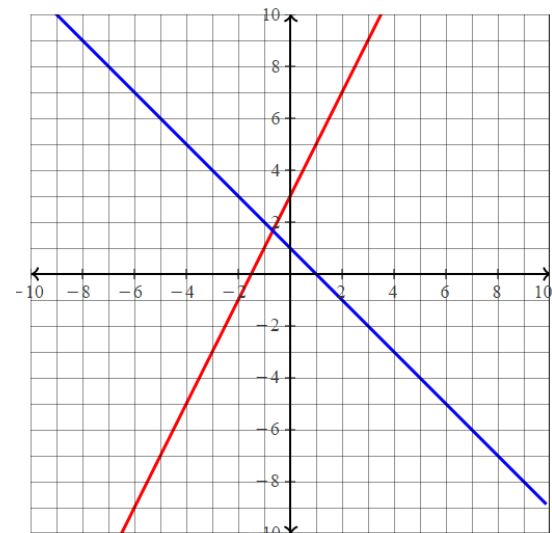
C.



B.



D.



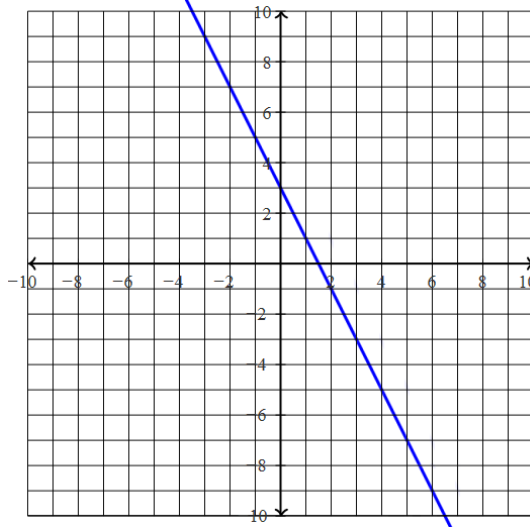
17. If $(x, -3)$ is a solution for the following system of equations, what is the value of x ?

$$y = 4x - 15$$

$$y = -3x + 6$$

$x =$ _____

18. The line graphed on the grid represents the first of two equations in a system of linear equations.



If the graph of the second equation in the system passes through the points $(0, -7)$ and $(8, -3)$, which statement is true?

- A. The only solution to the system is $(4, -5)$.
- B. The only solution to the system is $(8, -3)$.
- C. The system has no solution.
- D. The system has an infinite number of solutions.

19. Which of the following represents the equation of a line that contains the point $(-1, -9)$ and has a slope of 4?

- A. $y = 4x - 5$
- B. $y = 4x - 1$
- C. $y = 4x - 9$
- D. $y = 4x - 13$

20. Which of the following equations describes a line that passes through the point $(-6, 2)$ and is parallel to the line represented by the equation $2x - y = 4$?

- A. $y = 2x - 4$
- B. $y = -2x - 10$
- C. $y = 2x + 14$
- D. $y = -2x + 14$

21. Which of the following represents $4x - 3y + 6 = 0$ in slope-intercept form?

A. $y = \frac{3}{4}x - 2$

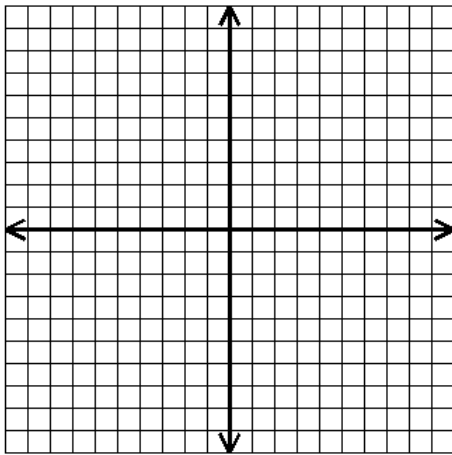
B. $y = \frac{4}{3}x - 2$

C. $y = \frac{4}{3}x + 2$

D. $y = \frac{3}{4}x + 2$

22. Write and graph the linear function that includes the points (4, 9) and (-2, -6).

Equation: _____

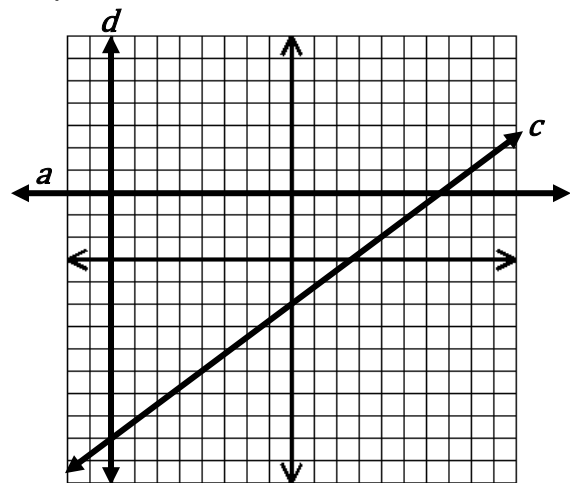


23. What is the slope of each line shown?

The slope of line *a* is _____

The slope of line *c* is _____.

The slope of line *d* is _____.



24. Which inequality best describes the graph shown to the right?

A. $y > -\frac{3}{4}x + 5$

C. $y < -\frac{3}{4}x + 5$

B. $y < -\frac{4}{3}x + 5$

D. $y > -\frac{4}{3}x + 5$

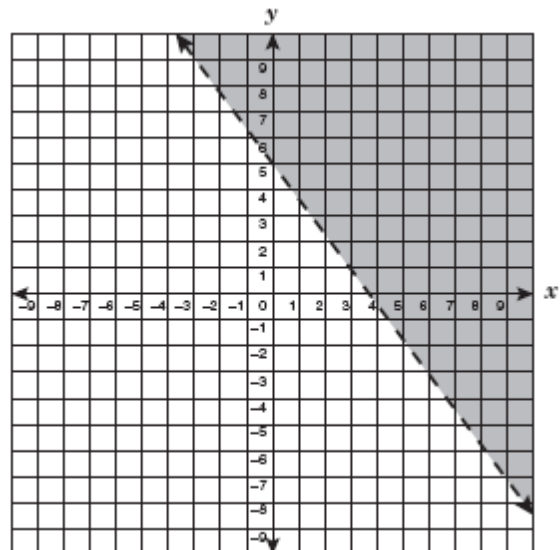
25. Which of the following represents a solution to the graph shown to the right?

A. (0, 5)

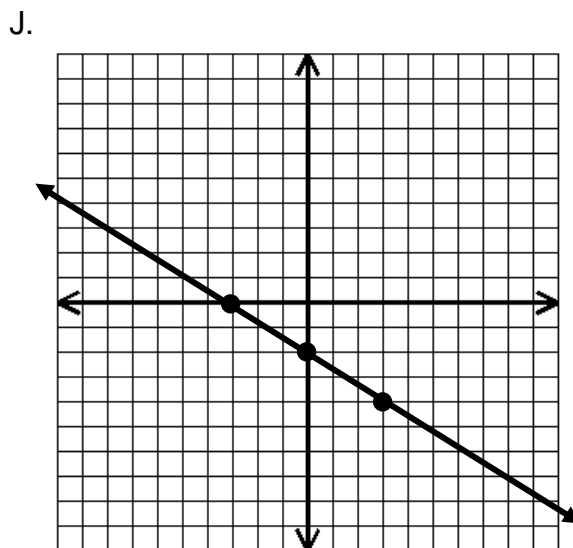
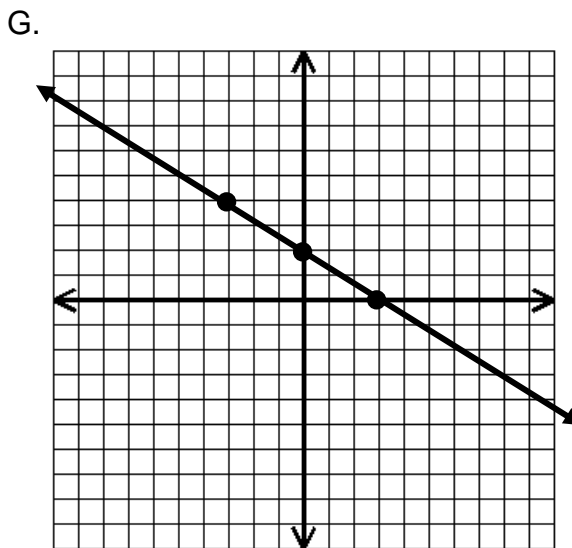
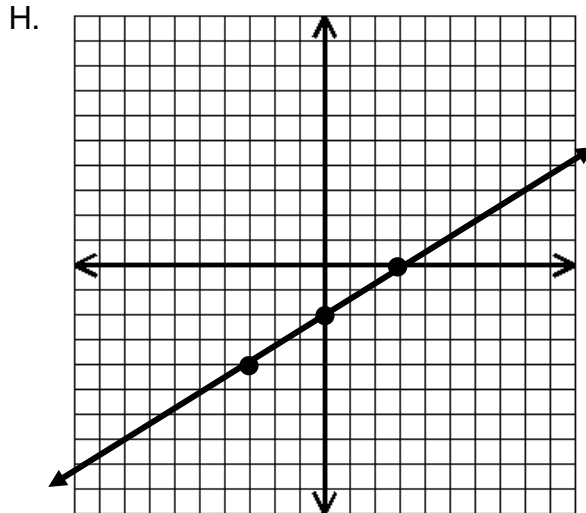
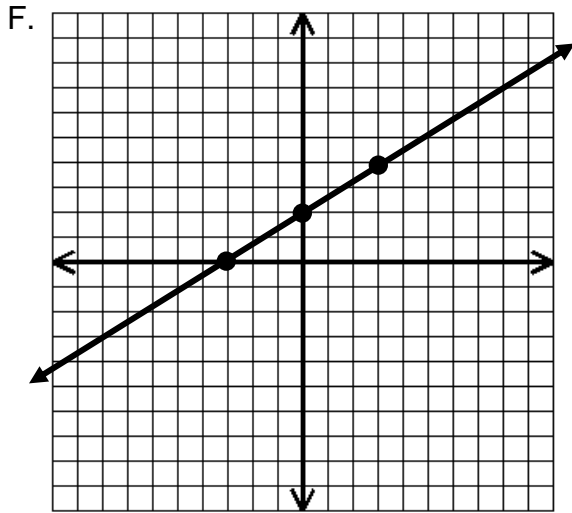
C. (6, 5)

B. (-5, 0)

D. (2, -5)



26. Which graph represents the equation $2x - 3y = 6$?



27. The total cost for renting a banquet hall includes a one-time rental fee and a cost per person attending the banquet. The relationship between n , the number of people attending the banquet, and t , the total cost, is shown on the graph.

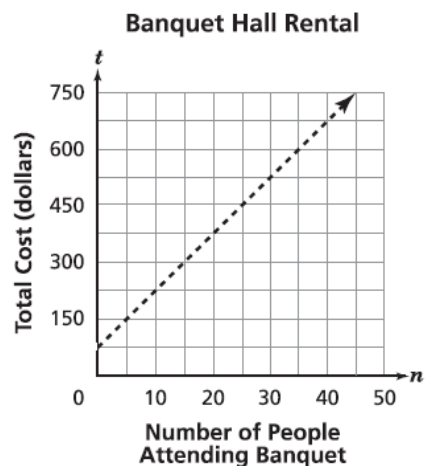
Which equation best represents the relationship between n and t ?

F. $t = 150 - 15n$

H. $t = 15n + 75$

G. $t = 75 - 15n$

J. $t = 15n + 150$



Answers in random order:

A	C	H	3	(-7, -15)
A	C	H	7	(3, 2)
A	C	D	15	1.20
B	C	-3	30	$y = \frac{5}{2}x - 1$
B	C	0	$\frac{3}{4}$	no solution
B	C	2	(2, 0)	infinitely many
Study, study, study! Good luck!				undefined

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A	C	H	7	(3, 2)
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B	C	0	$\frac{3}{4}$	no solution
B	C	2	(2, 0)	infinitely many
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