

Use a graphing calculator to find the solution(s) for the following systems of equations.

1.  $y = 8x - 6$

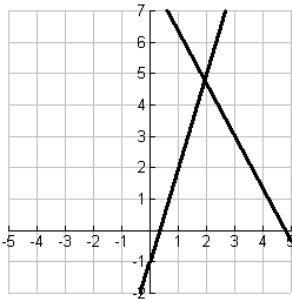
$$y = \left(\frac{3}{4}\right)^x$$

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

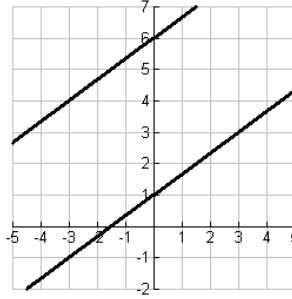
$$y = \left(\frac{5}{4}\right)^x$$

The graph of the system of two linear equations is shown. Tell whether the linear system has *infinitely many solutions*, *one solution*, or *no solution*.

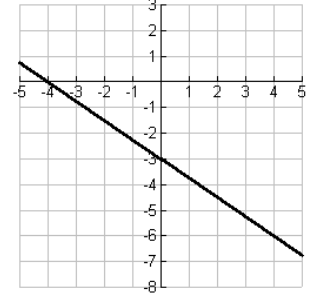
3.



4.



5.



Check whether the ordered pair is a solution of the system.

6.  $(-3, -4)$

$$4x - 7y = 16$$

$$-6x + y = 14$$

Solve the system using any algebraic method.

7.  $x + y = 2$

$$y = 2x + 5$$

8.  $2x - y = -8$

$$2x + y = 4$$

9.  $10x - 16y = 17$

$$y = 3 - x$$

10.  $-5x - 10y = 10$

$$3x + 6y = -6$$

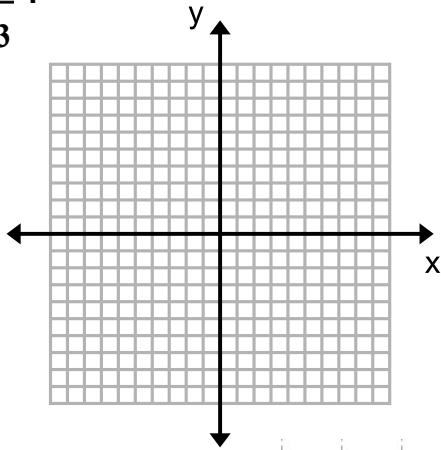
Solve the system using any algebraic method.

11.  $-2x + 2y = -5$   
 $x = -5 - y$

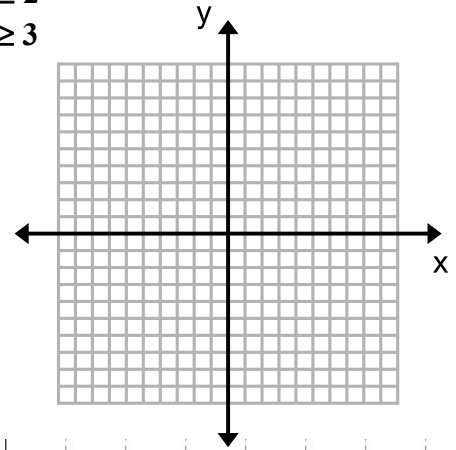
12.  $3x - 8y = 11$   
 $-6x + 16y = -5$

Graph the system of linear inequalities.

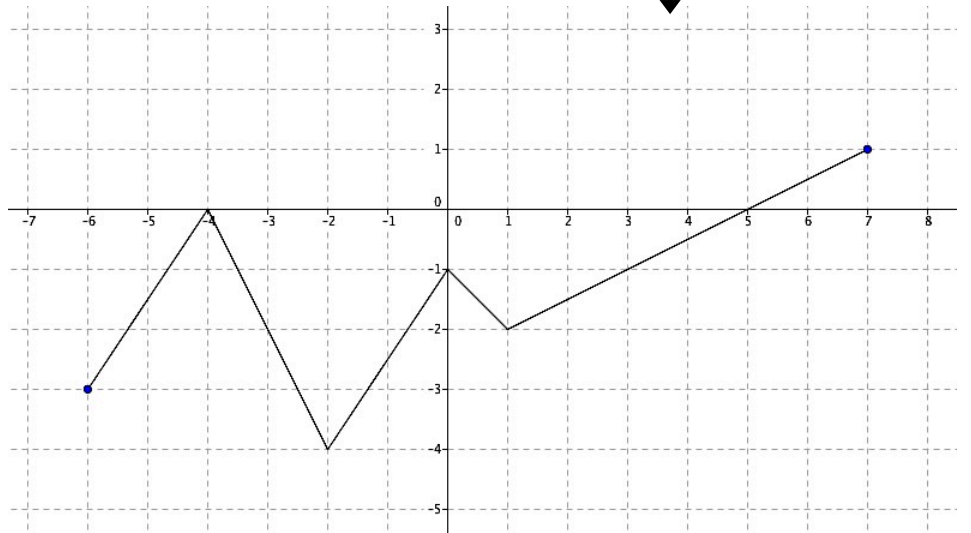
13.  $x + 2y \geq 4$   
 $x - y \leq 3$



14.  $y \leq 2$   
 $x \geq 3$



15. Describe the features of the function using **INTERVAL NOTATION**.



Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Increasing: \_\_\_\_\_ Decreasing: \_\_\_\_\_

Positive: \_\_\_\_\_ Negative: \_\_\_\_\_

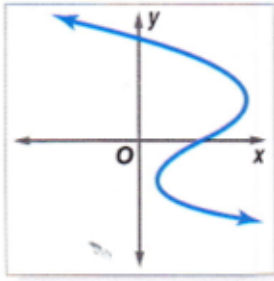
x-intercept(s): \_\_\_\_\_ y-intercept(s): \_\_\_\_\_

Maximum: \_\_\_\_\_ Minimum: \_\_\_\_\_

Is this a function? \_\_\_\_\_ Continuity: \_\_\_\_\_

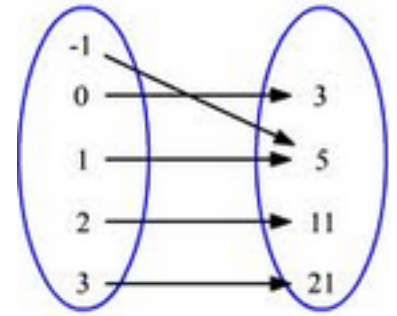
Are the following functions? Explain why or why not.

16.

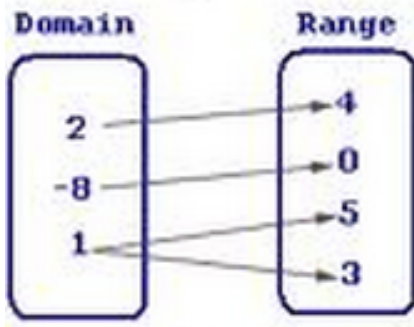


17.  $\{(-4,3), (5,3), (-2,1), (-7,1)\}$

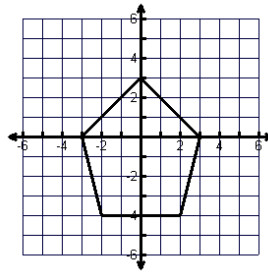
18. Domain Range



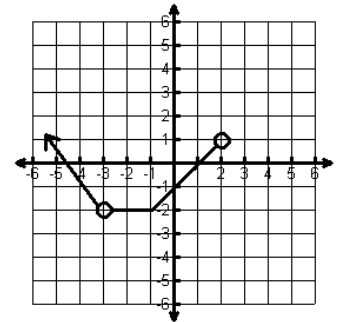
19.



20.



21.



Are the following functions? Explain why or why not. For 22-26 also state the domain and range.

22.  $\{(-4,3), (5,3), (-2,1), (-7,1)\}$

23.  $\{(-3,2), (4,5), (-3,7), (4,-9), (5,-3)\}$

24.

x	f(x)
-3	6
2	9
-4	3
2	9

25.

x	f(x)
-5	9
-2	1
4	3
1	1

26.

x	f(x)
-2	9
2	5
3	-8
2	8

Use  $f(x) = 3x - 4$  and  $g(x) = x^2 + 5$  to answer question 27-31.

27.  $f(-5)$

28.  $f(9)$

29.  $g(-5)$

30.  $g(9)$

31.  $g(2) + f(-1)$

Use the table to answer questions 32-35.

x	f(x)
-1	8
2	0
3	8
-2	-1
0	-2
4	2

32.  $f(-2)$

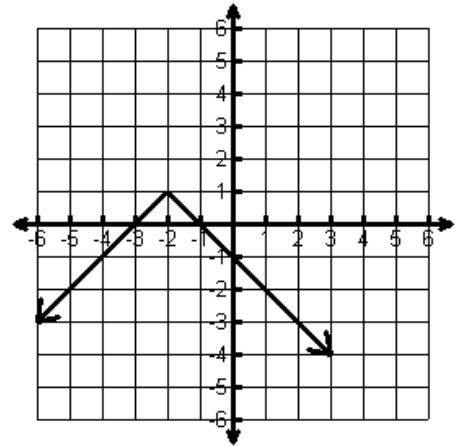
33.  $f(x)=-2$

34.  $f(x)=8$

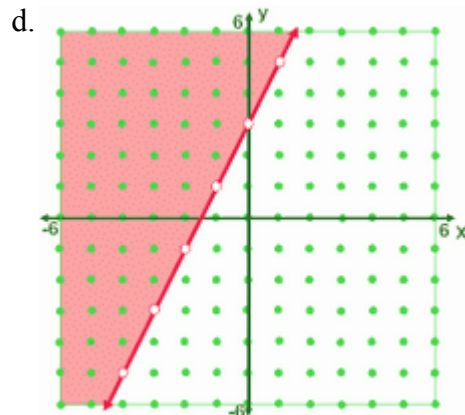
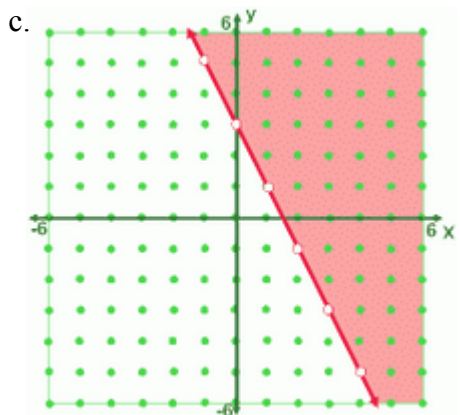
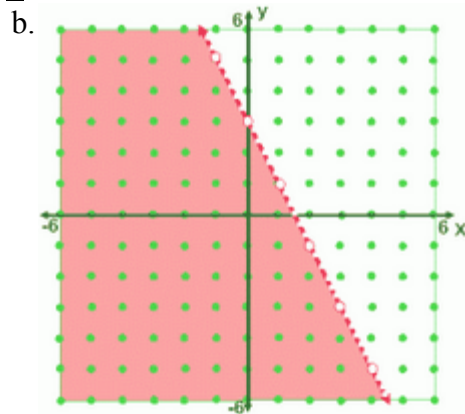
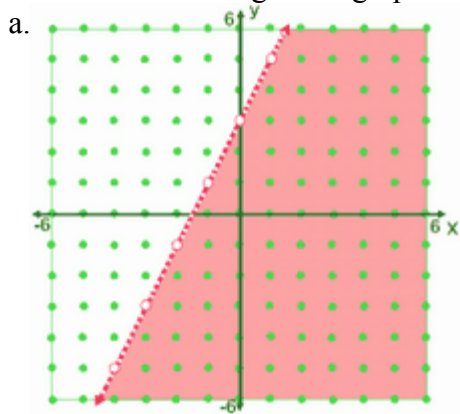
35.  $f(2)$

Use the graph to the right to answer questions 36-39.

36.  $f(2)$  37.  $f(x)=0$  38.  $f(x)=1$  39.  $f(x)=-3$



40. Which of the following is the graph of the inequality  $y \geq -2x + 3$ ?

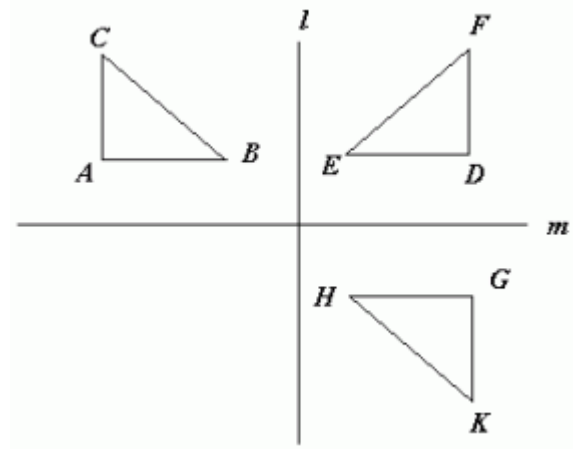


41. Chanise is going to graph the equations  $y = 3x + 2$  and  $y = 3x - 4$  on the same coordinate plane. Predict what the relationships between the lines will be.

- a. The graph of  $y = 3x + 2$  will be steeper than the graph of  $y = 3x - 4$ .
- b. One line will have a positive slope and the other will have a negative slope.
- c. Both lines will have an  $x$ -intercept of 3.
- d. The graph of  $y = 3x - 4$  will be shifted down 6 units from the graph of  $y = 3x + 2$ .

42. Which statement is true for the figure at right?

- a.  $\triangle DEF$  is a translation of  $\triangle ABC$
- b.  $\triangle GHK$  is a translation of  $\triangle ABC$
- c.  $\triangle DEF$  is a rotation of  $\triangle ABC$
- d.  $\triangle GHK$  is a rotation of  $\triangle ABC$

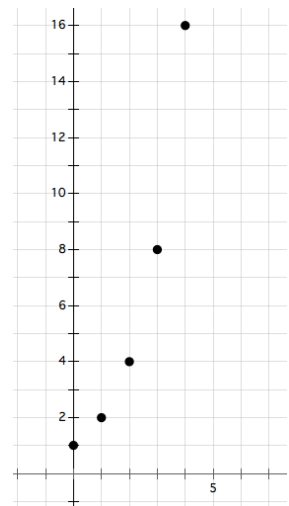


43. Solve the following equation for  $x$ .  $\frac{7+x}{8} + 1 = 2$

- a. -5
- b. -6
- c. 1
- d. 9

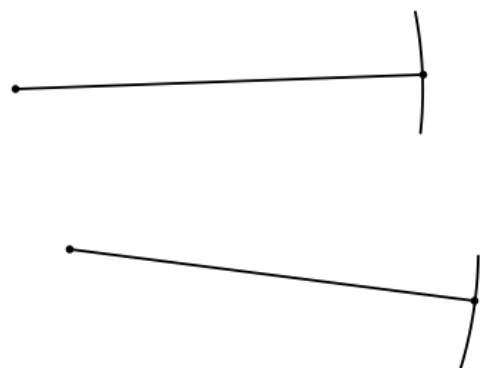
44. Which function models the sequence represented in the graph at right?

- a.  $f(x) = 16 - x$
- b.  $f(x) = 16^x$
- c.  $f(x) = 2x + 1$
- d.  $f(x) = 2^x$



45. The construction to the right shows which of the following compass and straight edge constructions?

- a) Copy an angle
- b) Parallel Lines
- c) Copy a segment
- d) Bisect a segment



46. The picture at right shows how to complete which construction?

