

1. Decide whether the following statement is true or false. If the statement is false, explain why.

The point (2,3) lies in quadrant II of the rectangular coordinate system.

Choose the correct answer below.

- ☐ A. False, the point lies in quadrant III.
- ☐ B. True.
- ☐ C. False, the point lies in quadrant I.
- ☐ D. False, the point lies in quadrant IV.

2. Enter the correct answer that completes the sentence below.

The point (2, \_\_\_\_\_) lies on the graph of the equation  $y = 2x - 3$ .

3. Select the correct choice that completes the sentence below.

Any point that lies on the x-axis has a y-coordinate equal to (1) \_\_\_\_\_

- (1) ☐ 1.
- ☐ 0.
- ☐ -1.

4. Enter the correct answer that completes the sentence below.

The y-intercept of the graph of  $y = -6x + 9$  is \_\_\_\_\_. (Type an ordered pair.)

5. Enter the correct answer that completes the sentence below.

The x-intercept of the graph of  $3x + 5y = 15$  is \_\_\_\_\_. (Type an ordered pair.)

6. Enter the correct answer that completes the sentence below.

The distance from the origin to the point  $(-10, 24)$  is \_\_\_\_\_.

7. For the point  $P(5, -10)$  and  $Q(10, -5)$ , find the distance  $d(P,Q)$  and the coordinates of the midpoint  $M$  of the segment  $PQ$ .

What is the distance?

\_\_\_\_\_  
(Simplify your answer. Type an exact answer, using radicals as need.)

What are the coordinates of the midpoint  $M$ ?

\_\_\_\_\_  
(Simplify your answer. Type an ordered pair, using integers or fractions.)

8. For the points P and Q do the following.

(a) Find the distance  $d(P,Q)$ .

(b) Find the coordinates of the midpoint M of the segment PQ.

$$P(3\sqrt{2}, 7\sqrt{5}), Q(\sqrt{2}, -\sqrt{5})$$

(a) The distance  $d(P,Q)$  is \_\_\_\_\_.

(Simplify your answer. Type an exact answer, using radicals as needed.)

(b) The midpoint of the segment PQ is M \_\_\_\_\_.

(Simplify your answer. Type an ordered pair. Type an exact answer for each coordinate, using radicals as needed.)

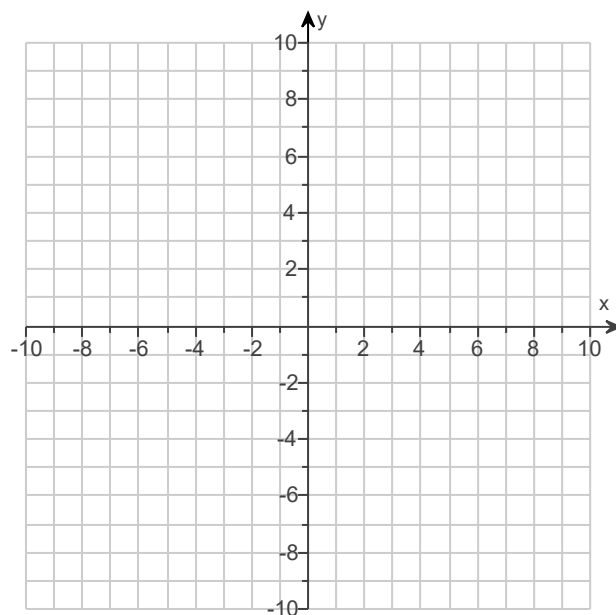
9. Give ordered pairs that are solutions and graph the equation.

$$5y = 3x - 15$$

Complete the ordered pairs so they are solutions to the given equation.

x	y
0	
	0

Use the graphing tool on the right to graph the equation.

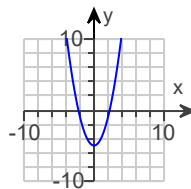


10. Graph the equation.

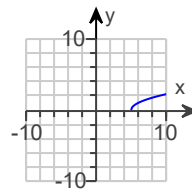
$$y = \sqrt{x-5}$$

Choose the correct graph of the equation.

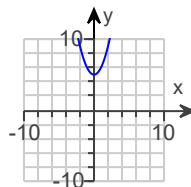
☐ A.



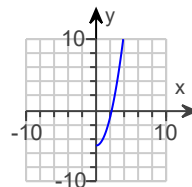
☐ B.



☐ C.



☐ D.



11. If a vertical line is drawn through the point  $(-3, -2)$ , at what point will it intersect the x-axis?

The vertical line will intersect the x-axis at point \_\_\_\_\_.  
(Type an ordered pair.)

12. If the point  $(a,b)$  is in the third quadrant, in what quadrant is  $(a, -b)$ ?  $(-a,b)$ ?  $(-a, -b)$ ?  $(-b, -a)$ ?
- 

The point  $(a, -b)$  lies in quadrant (1) \_\_\_\_\_

The point  $(-a,b)$  lies in quadrant (2) \_\_\_\_\_

The point  $(-a, -b)$  lies in quadrant (3) \_\_\_\_\_

The point  $(-b, -a)$  lies in quadrant (4) \_\_\_\_\_

- |                              |                                |                               |                               |
|------------------------------|--------------------------------|-------------------------------|-------------------------------|
| (1) <input type="radio"/> I. | (2) <input type="radio"/> III. | (3) <input type="radio"/> II. | (4) <input type="radio"/> II. |
| <input type="radio"/> III.   | <input type="radio"/> I.       | <input type="radio"/> III.    | <input type="radio"/> III.    |
| <input type="radio"/> II.    | <input type="radio"/> II.      | <input type="radio"/> I.      | <input type="radio"/> I.      |
| <input type="radio"/> IV.    | <input type="radio"/> IV.      | <input type="radio"/> IV.     | <input type="radio"/> IV.     |
- 

13. Enter the correct answers to complete the following sentence.

The circle with equation  $x^2 + y^2 = 169$  has center with coordinates \_\_\_\_\_ and a radius equal to \_\_\_\_\_.

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The circle with equation  $x^2 + y^2 = 169$  has center with coordinates \_\_\_\_\_ and a radius equal to \_\_\_\_\_.  
(Type an ordered pair.)

---

14. Enter the correct answer to complete the following sentence.

The circle with center  $(3,5)$  and radius 4 has equation \_\_\_\_\_.

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The circle with center  $(3,5)$  and radius 4 has equation \_\_\_\_\_.  
(Type an equation.)

---

15. Enter the correct answer to complete the following sentence.

The graph of  $(x - 2)^2 + (y + 5)^2 = 4$  has center with coordinates \_\_\_\_\_.

---

The graph of  $(x - 2)^2 + (y + 5)^2 = 4$  has center with coordinates \_\_\_\_\_.  
(Type an ordered pair.)

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16. Enter the correct answer to complete the following sentence.

The graph of  $x^2 + (y - 2)^2 = 9$  has center with coordinates \_\_\_\_\_.

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The graph of  $x^2 + (y - 2)^2 = 9$  has center with coordinates \_\_\_\_\_.  
(Type an ordered pair.)

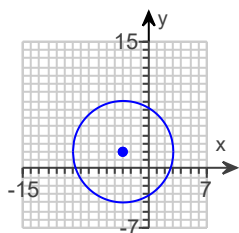
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17. Match the following equation with its graph.

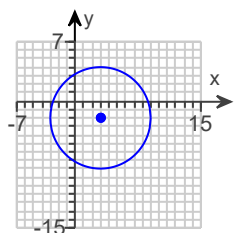
$$(x - 3)^2 + (y - 2)^2 = 36$$

Choose the correct graph below.

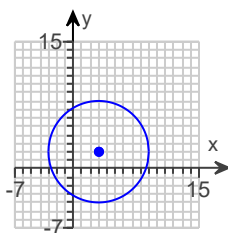
☐ A.



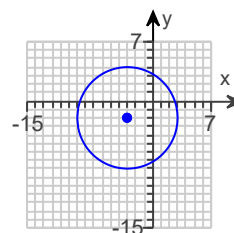
☐ B.



☐ C.



☐ D.

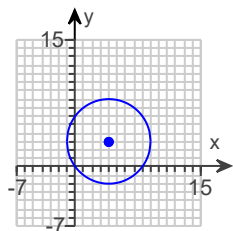


18. Match the following equation with its graph.

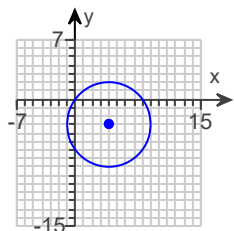
$$(x - 4)^2 + (y + 3)^2 = 25$$

Choose the correct graph below.

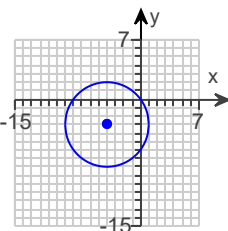
☐ A.



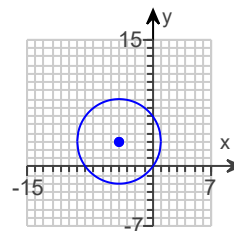
☐ B.



☐ C.



☐ D.

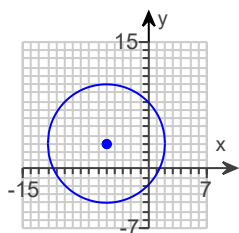


19. Match the following equation with its graph.

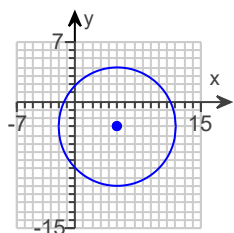
$$(x + 5)^2 + (y - 3)^2 = 49$$

Choose the correct graph below.

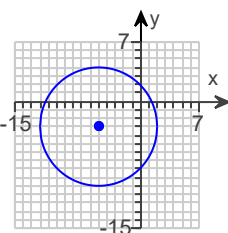
☐ A.



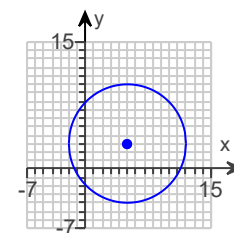
☐ B.



☐ C.



☐ D.

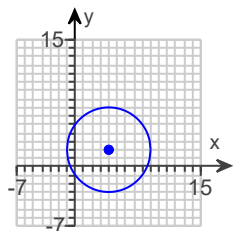


20. Match the following equation with its graph.

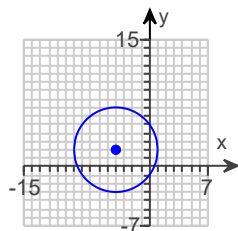
$$(x + 4)^2 + (y + 2)^2 = 25$$

Choose the correct graph below.

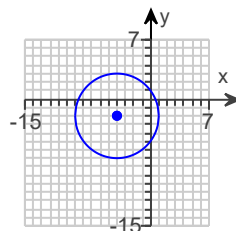
☐ A.



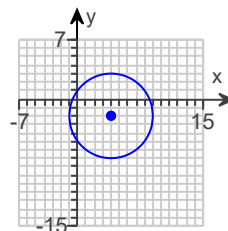
☐ B.



☐ C.



☐ D.



21. Answer the following question.

How many points lie on the graph of  $x^2 + y^2 = 0$ ?

There (1) \_\_\_\_\_ on the graph of  $x^2 + y^2 = 0$ .

- (1) ☐ are two points that lie  
☐ is only one point that lies  
☐ are no points that lie

22. Answer the following question.

How many points lie on the graph of  $x^2 + y^2 = -100$ ?

There (1) \_\_\_\_\_ on the graph of  $x^2 + y^2 = -100$ .

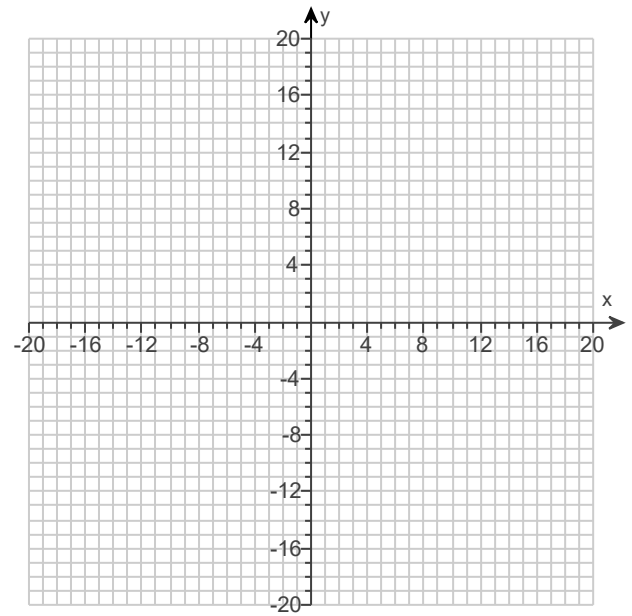
- (1) ☐ are no points that lie  
☐ is only one point that lies  
☐ are two points that lie

23. a) Find the center-radius form of the equation of the circle with center  $(0,0)$  and radius 16.  
b) Graph the circle.

a) The center-radius form of the equation of the circle is

\_\_\_\_\_.  
(Type an equation.)

b) Use the graphing tool to graph the circle.

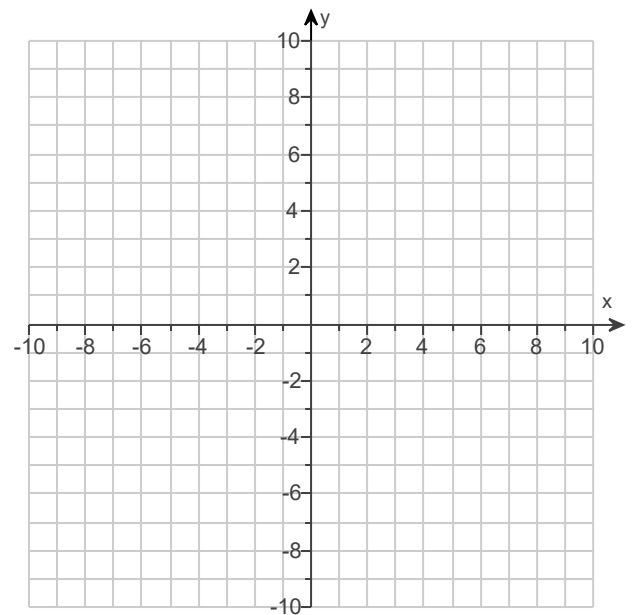


24. a) Find the center-radius form of the equation of the circle with center  $(-1, 2)$  and radius 3.  
b) Graph the circle.

a) The center-radius form of the equation of the circle is

\_\_\_\_\_.  
(Type an equation.)

b) Use the graphing tool to graph the circle.

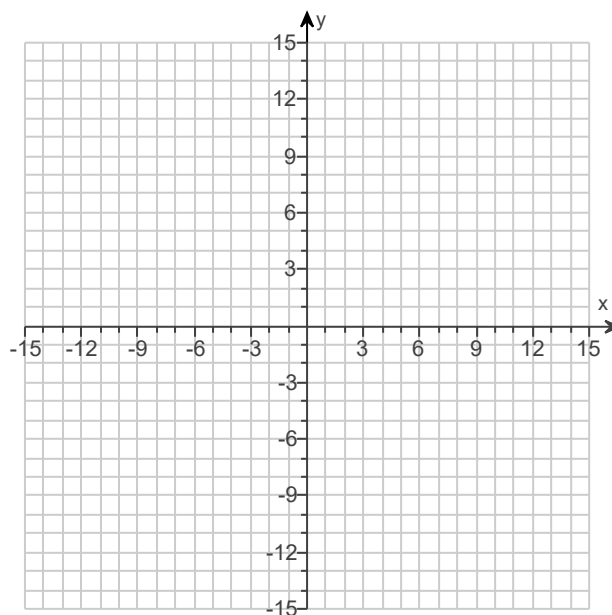


25. a) Find the center-radius form of the equation of the circle with center  $(5, -3)$  and radius 5.  
b) Graph the circle.

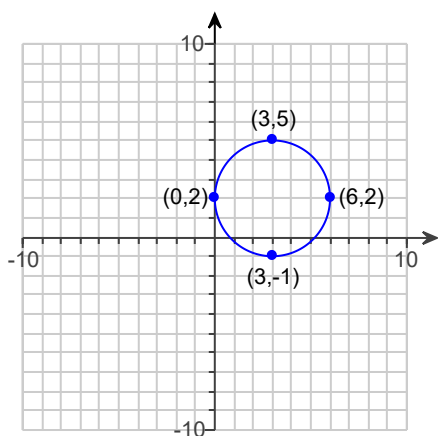
a) The center-radius form of the equation of the circle is

\_\_\_\_\_.  
(Type an equation.)

b) Use the graphing tool to graph the circle.



26. Use the graph below to determine the equation of the circle in **(a)** center-radius form and **(b)** general form.



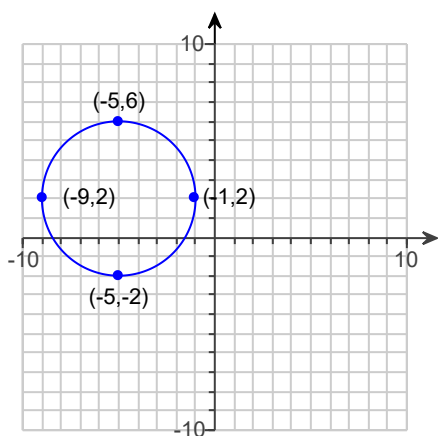
a. Type the equation in center-radius form.

\_\_\_\_\_  
(Simplify your answer.)

b. Type the equation in general form.

\_\_\_\_\_  
(Simplify your answer.)

27. Use the graph below to determine the equation of the circle in **(a)** center-radius form and **(b)** general form.



a. Type the equation in center-radius form.

\_\_\_\_\_  
(Simplify your answer.)

b. Type the equation in general form.

\_\_\_\_\_  
(Simplify your answer.)

28. Decide whether or not the equation has a circle as its graph. If it does, give the center and the radius. If it does not, describe the graph.

$$x^2 + y^2 + 8x + 6y + 24 = 0$$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

- ☐ A. The graph of the equation is a circle with center \_\_\_\_\_. (Type an ordered pair.)  
The radius of the circle is \_\_\_\_\_.
- ☐ B. The graph of the equation is a point.
- ☐ C. The graph of the equation is a line.
- ☐ D. The graph is nonexistent.

29. Decide whether or not the equation has a circle as its graph. If it does, give the center and the radius. If it does not, describe the graph.

$$4x^2 + 4x + 4y^2 + 8y - 139 = 0$$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

- ☐ A. The graph of the equation is a line.
- ☐ B. The graph of the equation is a circle with center \_\_\_\_\_. (Type an ordered pair.)  
The radius of the circle is \_\_\_\_\_.
- ☐ C. The graph of the equation is a point.
- ☐ D. The graph is nonexistent.

30. Decide whether or not the equation has a circle as its graph. If it does, give the center and the radius. If it does not, describe the graph.

$$x^2 + y^2 + 2x - 10y + 30 = 0$$

Select the correct choice below and, if necessary, fill in the answer boxes to complete your choice.

- ☐ A. The graph of the equation is a point.
- ☐ B. The graph of the equation is a circle with center \_\_\_\_\_. (Type an ordered pair.)  
The radius of the circle is \_\_\_\_\_.
- ☐ C. The graph of the equation is a line.
- ☐ D. The graph is nonexistent.

31. Determine the domain of the relation.

$$\{(3,1), (7,8), (15,13)\}$$

The domain is {\_\_\_\_\_}.

(Use a comma to separate answers as needed. Type each answer only once.)

32. Determine the range of the relation.

$$\{(8, 2), (9, 7), (11, 10)\}$$

The range is {\_\_\_\_\_}.

(Use a comma to separate answers as needed. Type each answer only once.)



33. Select the correct choices that complete the sentence below.

The equation  $y = 6x - 8$  defines a function with independent variable (1) \_\_\_\_\_ and dependent variable (2) \_\_\_\_\_.

- (1) ☐ y      (2) ☐ x.  
☐ x      ☐ y.

34. The function  $y = 2x - 8$  includes the ordered pair  $(8, \underline{\hspace{1cm}})$ .

The ordered pair is  $(8, \underline{\hspace{2cm}})$ .

35. For the function  $f(x) = -3x + 9$ ,  $f(-7) = \underline{\hspace{1cm}}$ .

$f(-7) = \underline{\hspace{2cm}}$  (Simplify your answer.)

36. For the function  $f(x) = \sqrt{x}$ , find  $f(64)$ .

$f(64) = \underline{\hspace{2cm}}$  (Simplify your answer.)

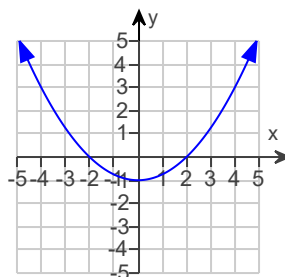
37. Fill in the blank to correctly complete the sentence.

The function  $g(x) = \sqrt{x}$  has the domain \_\_\_\_\_.  
(Type your answer in interval notation.)

38. Fill in the blank to correctly complete the sentence.

The function  $g(x) = \sqrt{x}$  has the range \_\_\_\_\_.  
(Type your answer in interval notation.)

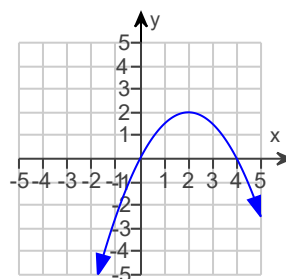
39. Use the graph to determine open interval on which the function is increasing, if any.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is increasing on the interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. There is no interval on which the function is increasing.

40. Use the graph to determine open interval on which the function is decreasing, if any.



Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is decreasing on the interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. There is no interval on which the function is decreasing.

41. Determine whether the relation is a function.

$$c = \{(9, 2), (-7, -5), (1, -2), (4, -6)\}$$

Is the relation a function?

- ☐ Yes
- ☐ No

42. Decide whether the following relation defines a function.

$$\{(3, 5), (4, 5), (4, 6)\}$$

Is the set of ordered pairs a function?

- ☐ Yes
- ☐ No

43. Determine whether the relation is a function.

$$c = \{(10, 3), (-1, -5), (1, 3), (4, -10)\}$$

Is the relation a function?

- ☐ No
- ☐ Yes

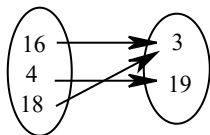
44. Determine whether the relation is a function.

Is the relation represented in the table a function?

- ☐ Yes
- ☐ No

x	y
4	-4
6	-4
9	-4

45. Determine whether the relation is a function, and give the domain and range.



Is this relation a function?

- ☐ Yes  
☐ No

The domain is {\_\_\_\_\_}.

(Use a comma to separate answers as needed. Type each answer only once.)

The range is {\_\_\_\_\_}.

(Use a comma to separate answers as needed. Type each answer only once.)

46. Decide whether the relation defined by the graph to the right defines a function, and give the domain and range.

Does the graphed relation define a function?

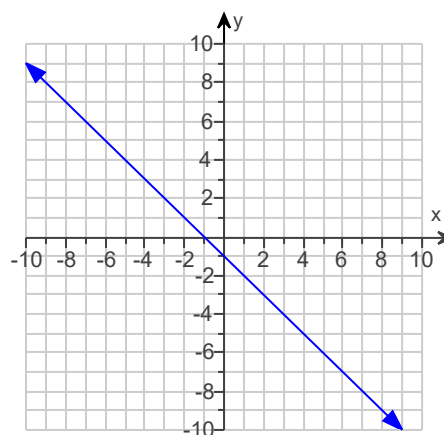
- ☐ No  
☐ Yes

What is the domain of the graphed relation?

\_\_\_\_\_  
 (Type your answer in interval notation.)

What is the range of the graphed relation?

\_\_\_\_\_  
 (Type your answer in interval notation.)



47. Decide whether the relation defined by the graph to the right defines a function, and give the domain and range.

Does the graphed relation define a function?

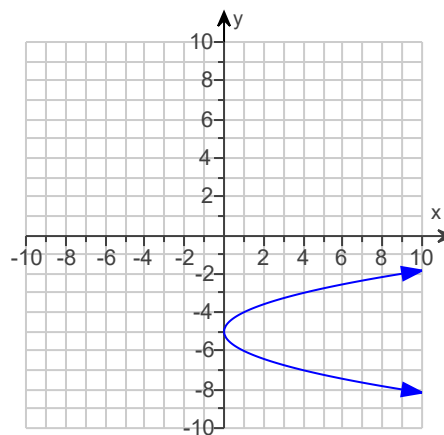
- ☐ No  
☐ Yes

What is the domain of the graphed relation?

\_\_\_\_\_  
 (Type your answer in interval notation.)

What is the range of the graphed relation?

\_\_\_\_\_  
 (Type your answer in interval notation.)



48. Let  $f(x) = -4x + 7$ . Find  $f(0)$ .

$f(0) =$  \_\_\_\_\_ (Simplify your answer.)

49. Let  $g(x) = -x^2 + 5x + 2$ . Find and simplify  $g(-2)$ .

$g(-2) =$  \_\_\_\_\_ (Simplify your answer.)

50. Let  $f(x) = -4x + 7$ . Find and simplify  $f(n)$ .

$f(n) =$  \_\_\_\_\_ (Simplify your answer.)

51. Let  $f(x) = -2x + 4$ .

Find the indicated expression.

$f(-x)$

$f(-x) =$  \_\_\_\_\_  
(Simplify your answer.)

52. Let  $f(x) = -3x + 5$ . Find and simplify  $f(x + 2)$ .

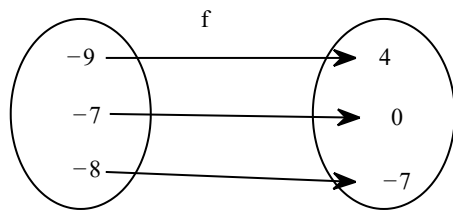
$f(x + 2) =$  \_\_\_\_\_ (Simplify your answer.)

53. Let  $f = \{(8, -3), (6, 8), (1, 5)\}$ .

Find  $f(8)$ .

$f(8) =$  \_\_\_\_\_

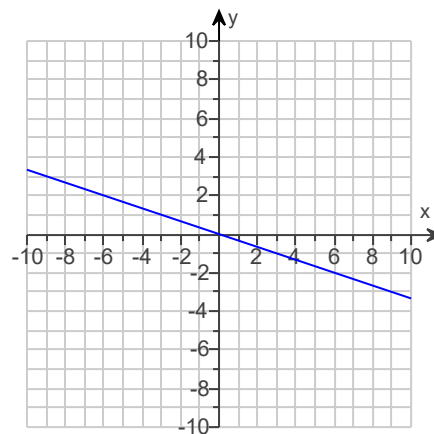
54. Find  $f(-7)$ .



$f(-7) =$  \_\_\_\_\_

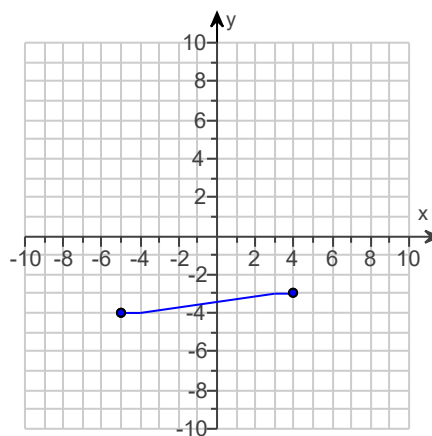
55. Use the graph to find the indicated value of the function.

$f(-3) =$  \_\_\_\_\_



56. Use the graph to find  $f(3)$ .

$f(3) =$  \_\_\_\_\_



57. An equation that defines  $y$  as a function  $f$  of  $x$  is given.

- a) Solve the equation for  $y$  in terms of  $x$ , and replace  $y$  with the function notation  $f(x)$ .  
b) Find  $f(7)$ .

$$x + 2y = 8$$

- a) Solve the equation for  $y$  in terms of  $x$ , and replace  $y$  with the function notation  $f(x)$ .

$f(x) =$  \_\_\_\_\_

(Simplify your answer. Use integers or fractions for any numbers in the expression.)

- b) Find  $f(7)$ .

$f(7) =$  \_\_\_\_\_

(Type an integer or a fraction.)

58. An equation that defines  $y$  as a function of  $x$  is given. **a.** Solve for  $y$  in terms of  $x$  and replace  $y$  with the function notation  $f(x)$ . **b.** Find  $f(3)$ .

$$y + 3x^2 = 4 - 5x$$

- a.** Solve for  $y$  in terms of  $x$  and replace  $y$  with the function notation  $f(x)$ .

$f(x) =$  \_\_\_\_\_

- b.** Find  $f(3)$ .

$f(3) =$  \_\_\_\_\_

59. An equation that defines  $y$  as a function of  $x$  is given. **a.** Solve for  $y$  in terms of  $x$  and replace  $y$  with the function notation  $f(x)$ . **b.** Find  $f(3)$ .

$$2x - 2y = 1$$

- a.** Solve for  $y$  in terms of  $x$  and replace  $y$  with the function notation  $f(x)$ .

$f(x) =$  \_\_\_\_\_ (Use integers or fractions for any numbers in the expression.)

- b.** Find  $f(3)$ .

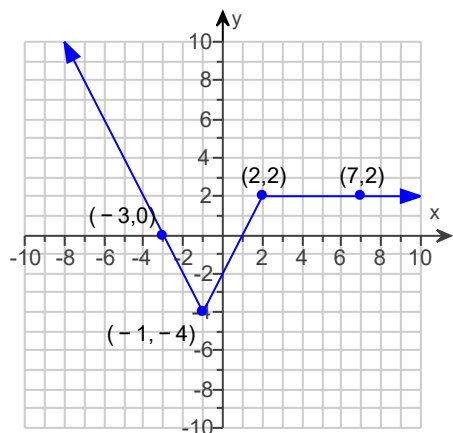
$f(3) =$  \_\_\_\_\_ (Type an integer or a fraction.)

60. If  $(3,4)$  is on the graph of  $y = f(x)$ , which one of the following must be true?

Choose the correct answer below.

- ☐  $f(3) = 4$
- ☐  $f(4) = 3$

61. State the open intervals over which the function is (a) increasing, (b) decreasing, and (c) constant.



(a) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The function is increasing over the open interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)

☐ B. The function is never increasing.

(b) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The function is decreasing over the open interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)

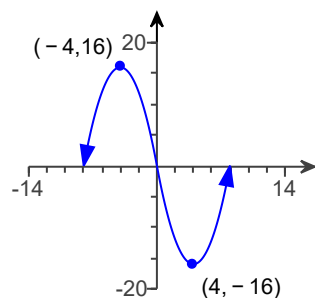
☐ B. The function is never decreasing.

(c) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The function is constant over the open interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)

☐ B. The function is never constant.

62. Determine the largest open intervals of the domain over which the function is (a) increasing, (b) decreasing, and (c) constant.



(a) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is increasing on the interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never increasing.

(b) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

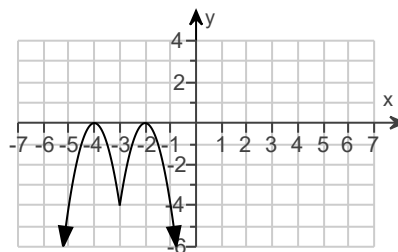
- ☐ A. The function is decreasing on the interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never decreasing.

(c) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is constant on the interval(s) \_\_\_\_\_.  
(Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never constant.

63. Determine the largest open intervals of the domain over which each function is

- (a) increasing,  
 (b) decreasing, and  
 (c) constant.



(a) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is increasing on the interval(s) \_\_\_\_\_.  
 (Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never increasing.

(b) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is decreasing on the interval(s) \_\_\_\_\_.  
 (Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never decreasing.

(c) Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The function is constant on the interval(s) \_\_\_\_\_.  
 (Type your answer in interval notation. Use a comma to separate answers as needed.)
- ☐ B. The function is never constant.

64. Choose the correct function/equation for the following description.

A linear function whose graph has y-intercept (0, 6)

Choose the correct answer below.

- ☐ A.  $f(x) = 6x + 1$
- ☐ B.  $f(x) = 3x + 6$
- ☐ C.  $f(x) = x - 6$
- ☐ D.  $f(x) = -6x + 5$

65. Match the description with the correct response.

a vertical line

Choose the correct answer below.

- ☐ A.  $x + y = 5$
- ☐ B.  $5x - y = -1$
- ☐ C.  $y = -1$
- ☐ D.  $x = -1$



66. Choose the correct function/equation for the following description.

a constant function

Choose the correct answer below.

- ☐ A.  $f(x) = 5x$
- ☐ B.  $f(x) = 3x + 6$
- ☐ C.  $f(x) = -8$
- ☐ D.  $f(x) = x^2$

67. Match the description with the correct response.

a linear function whose graph has x-intercept ( - 6,0) and y-intercept (0,18)

Choose the correct answer below.

- ☐ A.  $3x + y = -18$
- ☐ B.  $3x - y = 18$
- ☐ C.  $-3x - y = 18$
- ☐ D.  $3x - y = -18$

68. Choose the correct function/equation for the following description.

a linear function whose graph passes through the origin

Choose the correct answer below.

- ☐ A.  $f(x) = 5x$
- ☐ B.  $f(x) = 3x + 6$
- ☐ C.  $f(x) = -8$
- ☐ D.  $f(x) = x^2$

69. Match the description with the correct response.

a function that is not linear

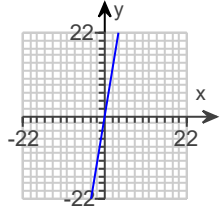
Choose the correct answer below.

- ☐ A.  $f(x) = x^3$
- ☐ B.  $f(x) = 3x - 3$
- ☐ C.  $f(x) = 3x + 3$
- ☐ D.  $f(x) = 3$

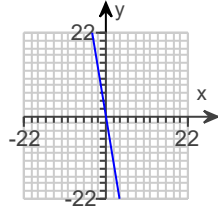
70. Identify the line that could have the slope  $-6$ .

Choose the correct graph below.

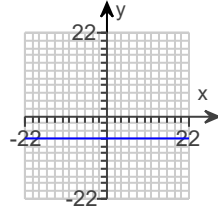
☐ A.



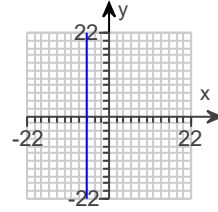
☐ B.



☐ C.



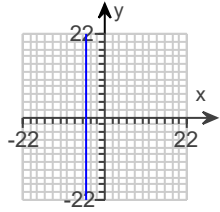
☐ D.



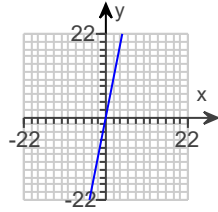
71. Identify the line that could have the slope  $0$ .

Choose the correct graph below.

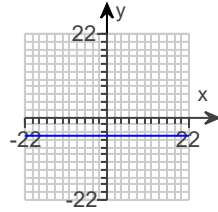
☐ A.



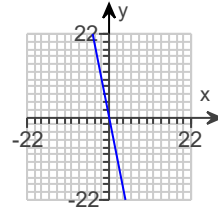
☐ B.



☐ C.



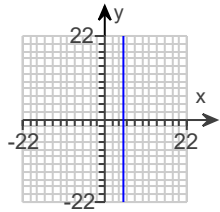
☐ D.



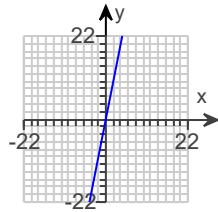
72. Identify the line that could have the slope  $5$ .

Choose the correct graph below.

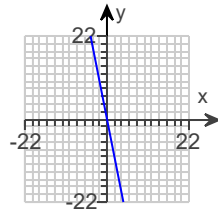
☐ A.



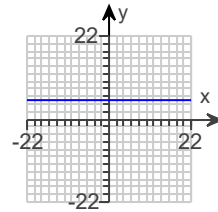
☐ B.



☐ C.



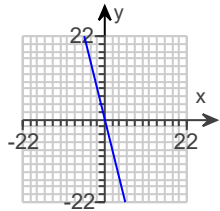
☐ D.



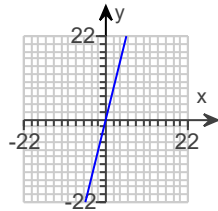
73. Identify the line that could have the slope undefined.

Choose the correct graph below.

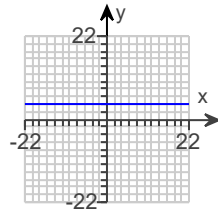
☐ A.



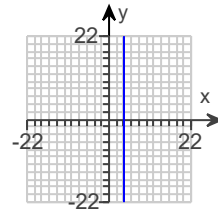
☐ B.



☐ C.



☐ D.



74. Graph the linear function  $f(x) = \frac{1}{3}x - 6$ . Identify if it is a constant function. Give the domain and range.

Use the graphing tool to graph the equation.

Is the function a constant function?

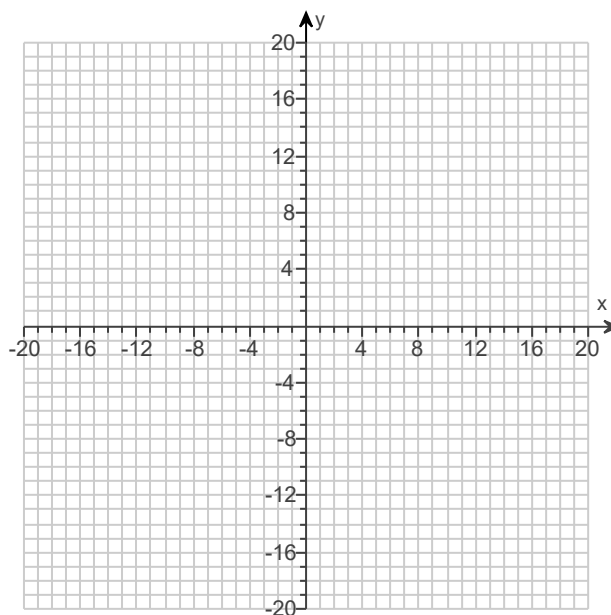
- ☐ No  
☐ Yes

What is the domain? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The domain is \_\_\_\_\_.  
(Type your answer in interval notation.)
- ☐ B. The domain is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)

What is the range? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The range is \_\_\_\_\_.  
(Type your answer in interval notation.)
- ☐ B. The range is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)



75. Graph the following linear function. Give the domain and range. Identify whether it is a constant function.

$$f(x) = -2$$

Use the graphing tool to graph the linear equation.

What is the domain of the function? Select the correct choice below and fill in the answer box to complete your choice.

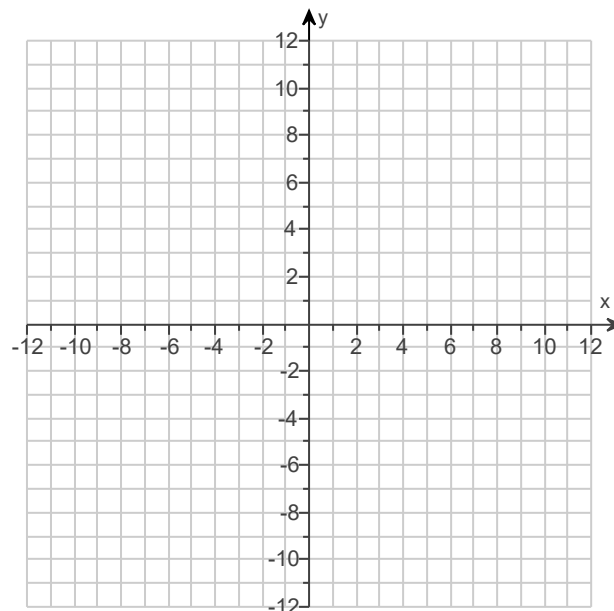
- ☐ A. The domain is \_\_\_\_\_.  
(Type your answer in interval notation.)
- ☐ B. The domain is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)

What is the range? Select the correct choice below and fill in the answer box to complete your choice.

- ☐ A. The range is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)
- ☐ B. The range is \_\_\_\_\_.  
(Type your answer in interval notation.)

Is  $f(x) = -2$  a constant function?

- ☐ No
- ☐ Yes



76. Graph the line  $2x + 5y = 10$ . Give the domain and range.

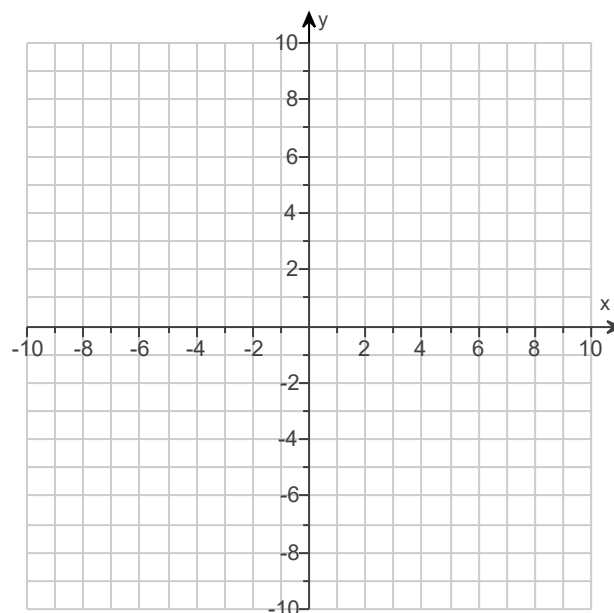
Use the graphing tool to graph the equation.

What is the domain? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The domain is \_\_\_\_\_.  
(Type your answer in interval notation.)
- ☐ B. The domain is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)

What is the range? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The range is \_\_\_\_\_.  
(Type your answer in interval notation.)
- ☐ B. The range is {\_\_\_\_\_}.  
(Use a comma to separate answers as needed.)



77. Graph the given line. Give the domain and range.

$$-x + 9 = 0$$

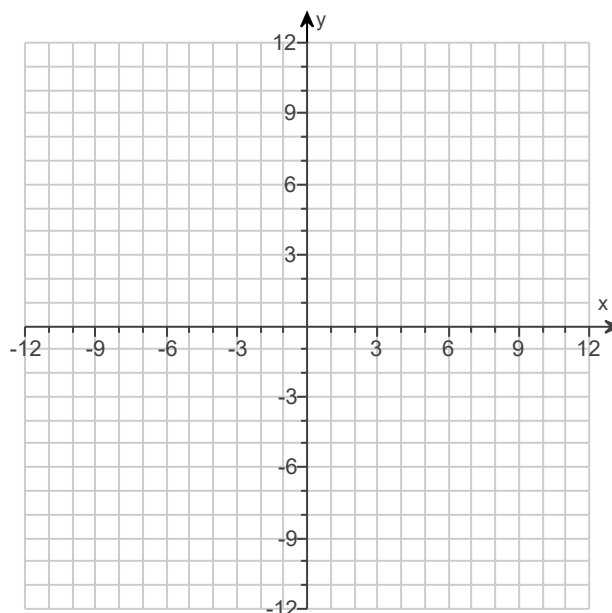
Use the graphing tool to graph the line.

What is the domain of the relation? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The domain is  $\{ \quad \}$ .
- ☐ B. The domain is  $\quad$ .  
(Type your answer in interval notation.)

What is the range of the relation? Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

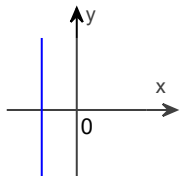
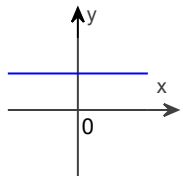
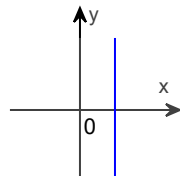
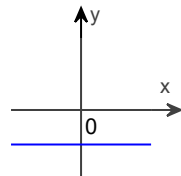
- ☐ A. The range is  $\{ \quad \}$ .
- ☐ B. The range is  $\quad$ .  
(Type your answer in interval notation.)



78. Match the following equation with the sketch that most closely resembles its graph.

$$y = 2$$

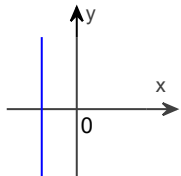
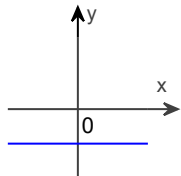
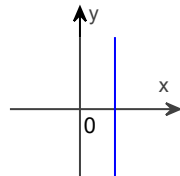
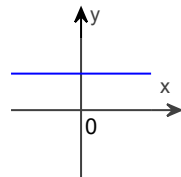
Choose the correct graph below.

- ☐ A. 
- ☐ B. 
- ☐ C. 
- ☐ D. 

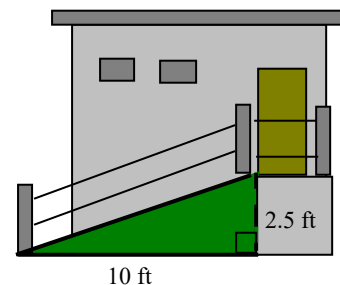
79. Match the following equation with the sketch that most closely resembles its graph.

$$x = -3$$

Choose the correct graph below.

- ☐ A. 
- ☐ B. 
- ☐ C. 
- ☐ D. 

80. A walkway rises 2.5 ft for every 10 ft on the horizontal. Find its slope (or grade).



Select all that apply.

- ☐ A. 25%
- ☐ B. 0.25
- ☐ C. 4
- ☐ D.  $\frac{1}{4}$
- ☐ E. 400%
- ☐ F. 2.5%
- ☐ G.  $\frac{2.5}{10}$
- ☐ H.  $\frac{10}{2.5}$

81. Find the slope of the line containing the pair of points.

$(-11, -9)$  and  $(3, 2)$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The slope is \_\_\_\_\_. (Simplify your answer. Type an integer or a fraction.)
- ☐ B. The slope is undefined.

82. Find the slope of the line satisfying the following conditions.

horizontal, through  $(7, 2)$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- ☐ A. The slope is \_\_\_\_\_. (Type an integer or a simplified fraction.)
- ☐ B. The slope is undefined.

83. Find the slope of the line satisfying the following conditions.

vertical through  $(4, -2)$

Select the correct choice below and fill in any answer boxes within your choice.

- ☐ A. The slope is \_\_\_\_\_. (Type an integer or a simplified fraction.)
- ☐ B. The slope is undefined.

84. Find the slope of the line and sketch the graph.

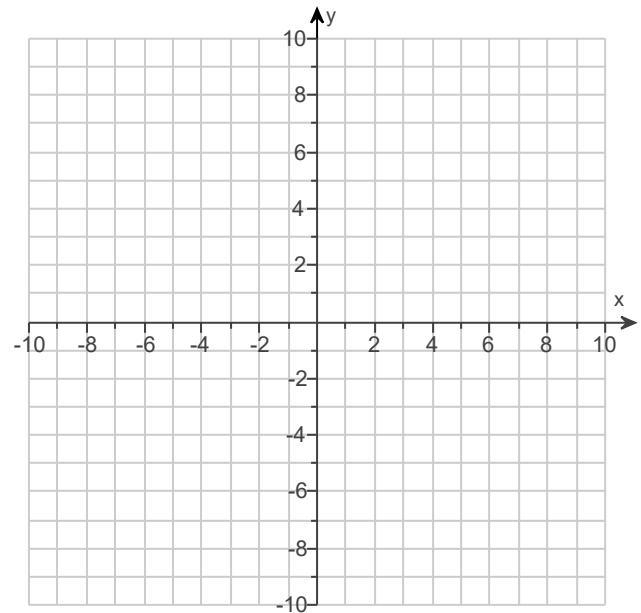
$$4x - 2y = 8$$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

☐ A. The slope is \_\_\_\_\_.  
(Type an integer or a simplified fraction.)

☐ B. The slope is undefined.

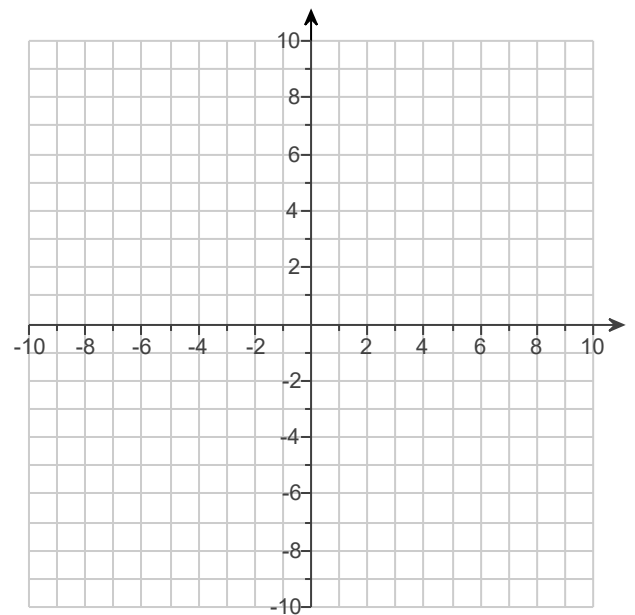
Use the graphing tool to graph the equation.



85. Graph the line with the given point and slope.

The line through  $(-3, 2)$  with slope  $\frac{5}{2}$

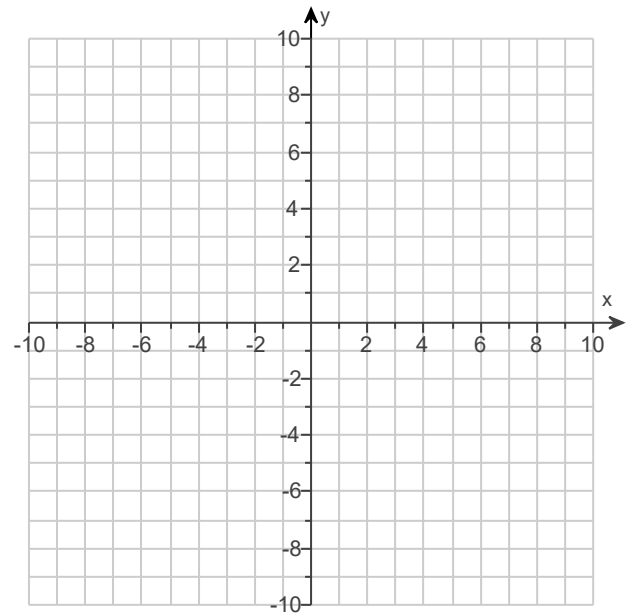
Use the graphing tool on the right to graph the line.



86. Graph the line containing the point P and having slope m.

$$P = (4, 4); m = 0$$

Use the graphing tool to graph the line.



87. Graph the line that passes through  $\left(-\frac{7}{2}, 2\right)$  and has an undefined slope. Plot two points on the line.

Use the graphing tool to graph the line.

