

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

For the set, list all elements that belong to the specified set.

1) $\{3, \sqrt{8}, -2, 0, 0.64\}$; Rational numbers 1) _____

For the measured quantity, state the set of numbers that is most appropriate to describe it. Choose from the natural numbers, integers, and rational numbers.

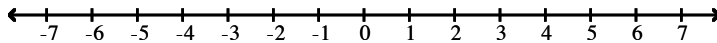
2) Hat sizes 2) _____

3) Net annual incomes of local manufacturers, in dollars 3) _____

4) The average speeds of race cars for one lap at Wilmot Speedway 4) _____

Graph the set of numbers on a number line.

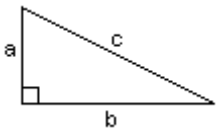
5) $\left\{-3, -4, 5, 4, \frac{5}{4}\right\}$ 5) _____



Name the possible quadrants in which the point (x, y) can lie if the condition is true.

6) $0 < xy$ 6) _____

Find the length of the unknown side of the right triangle. In each case, a and b represent the lengths of the legs and c represents the length of the hypotenuse.

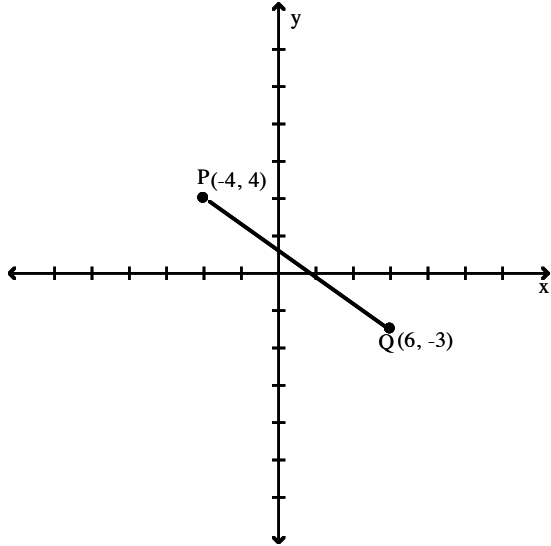


7) $a = 7, b = 24$; find c 7) _____

Find the distance between P and Q and the coordinates of the midpoint of the segment joining P and Q.

8)

8) _____



Provide an appropriate response.

9) In what quadrant of the xy-plane does P(-7, 8) lie?

9) _____

Using interval notation, write the set.

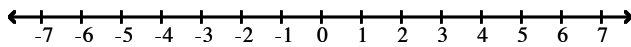
10) $\{x \mid x \leq -4\}$

10) _____

Graph the set on a number line.

11) $(-1, 3]$

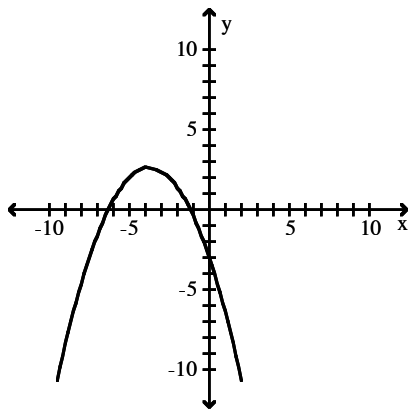
11) _____



Tell whether the relation is a function.

12)

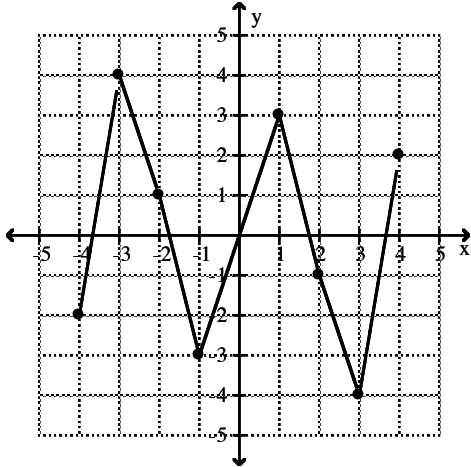
12) _____



Use the graph of $y = f(x)$ to find the function value.

13) $f(-1)$

13) _____



Evaluate the function.

14) Find $f(-3)$ when $f(x) = \frac{1}{10}x + \frac{1}{5}$.

14) _____

Find the zero of f .

15) $f(x) = \frac{1}{3}x$

15) _____

Find the slope (if defined) of the line that passes through the given points.

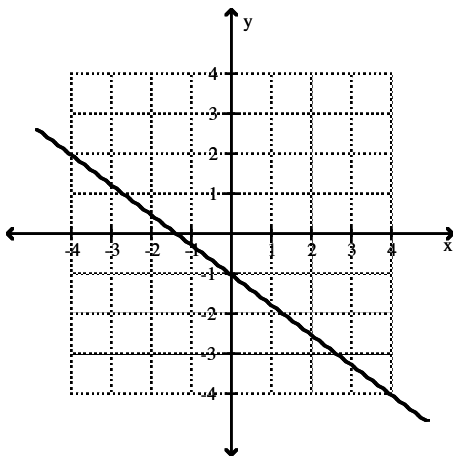
16) (2, 4) and (6, 4)

16) _____

The graph of a linear function f is shown. Identify the slope.

17)

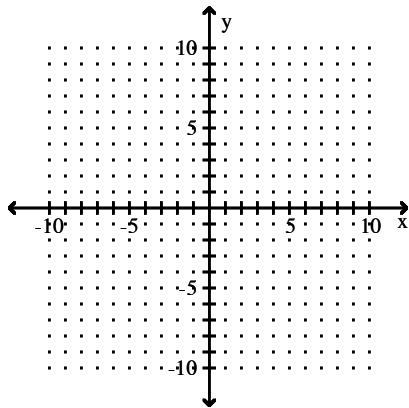
17) _____



Graph the line passing through the given point and having the given slope.

18) Through $(0, 5)$, $m = \frac{1}{3}$

18) _____



Solve the problem.

19) A moving firm charges a flat fee of \$45 plus \$40 per hour. Let $f(x)$ represent the cost, in dollars, of using the moving firm for x hours. Write a formula for $f(x)$.

19) _____

Write the slope-intercept form of the line that passes through the given point with slope m .

20) Through $(2, 5)$, $m = -\frac{3}{8}$

20) _____

Find the slope-intercept form of the line satisfying the given conditions.

21) Through $(-5, -3)$ and $(0, -7)$

21) _____

Write the equation in the form $y = mx + b$.

22) $4x + 3y = 8$

22) _____

Provide an appropriate response.

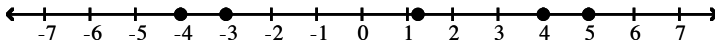
23) What is the general equation of all lines of slope 1?

23) _____

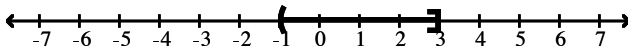
Answer Key

Testname: M101Q1P1T1P4

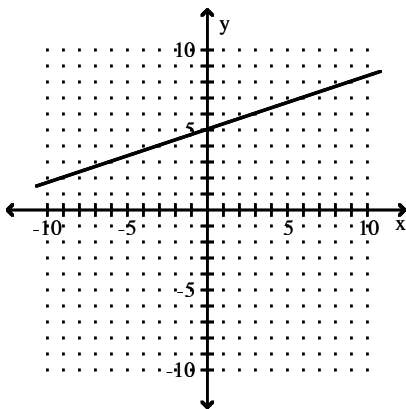
- 1) 3, -2, 0, 0.64
- 2) Rational numbers
- 3) Integers
- 4) Rational numbers
- 5)



- 6) I or III
- 7) 25
- 8) $\sqrt{149}; \left(1, \frac{1}{2}\right)$
- 9) II
- 10) $(-\infty, -4]$
- 11)



- 12) Function
- 13) -3
- 14) $-\frac{1}{10}$
- 15) 0
- 16) 0
- 17) $-\frac{3}{4}$
- 18)



- 19) $f(x) = 40x + 45$
- 20) $y = -\frac{3}{8}x + \frac{23}{4}$
- 21) $y = -\frac{4}{5}x - 7$
- 22) $y = -\frac{4}{3}x + \frac{8}{3}$
- 23) $y = x + b$