Quiz Sections 1.1–1.4

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.

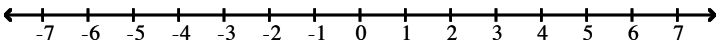
2) Hat sizes 2) _____

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.

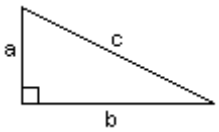
5) $\left\{-3, -4, 5, 4, \frac{5}{4}\right\}$ 5) _____



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

6) $0 < xy$ 6) _____

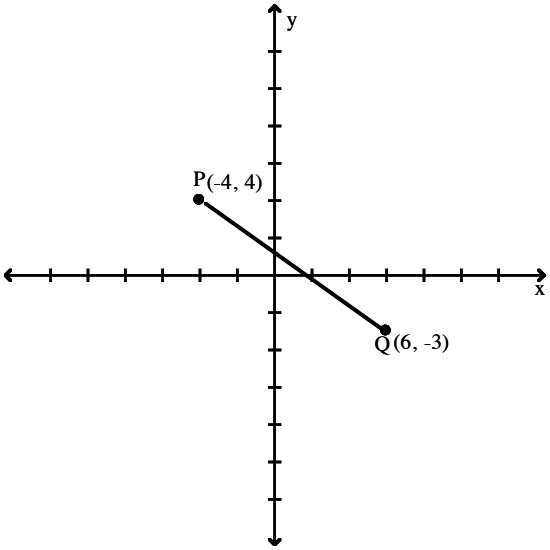
Find the length of the unknown side of the right triangle. In each case, a and b represent the lengths of the legs and c represents the length of the hypotenuse.



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.

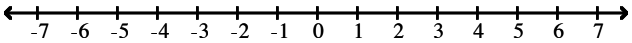
9) In what quadrant of the xy–plane does P(–7, 8) lie? 9) _____

Using interval notation, write the set.

10) $\{x \mid x \le -4\}$ 10) _____

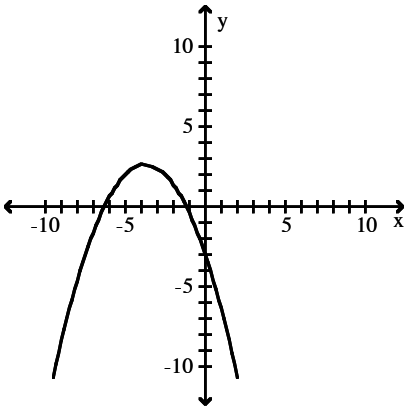
Graph the set on a number line.

11) (–1, 3] 11) _____



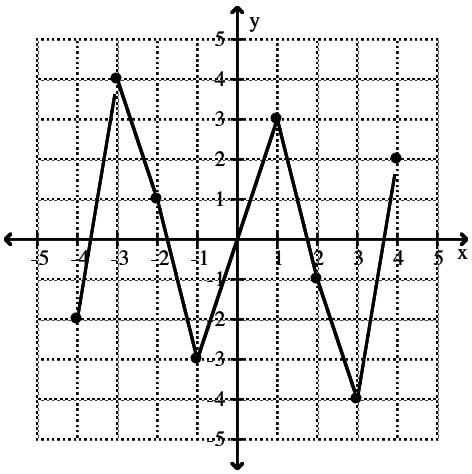
Tell whether the relation is a function.

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.

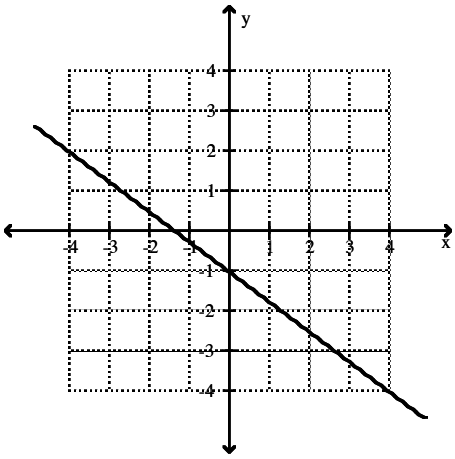
15) $f(x) = \frac{1}{3}x$ 15) _____

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

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

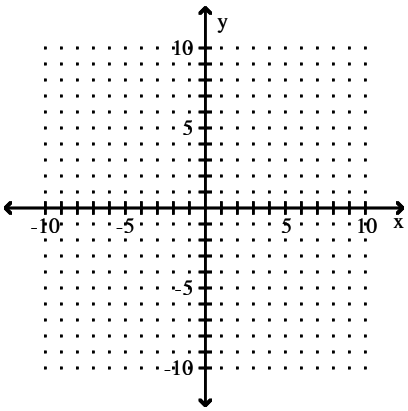
The graph of a linear function f is shown. Identify the slope.

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 $y = mx + b$.

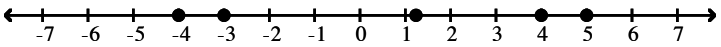
22) $4x + 3y = 8$ 22) _____

Provide an appropriate response.

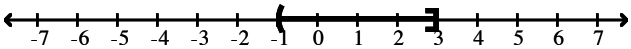
23) What is the general equation of all lines of slope 1? 23) _____

Answer Key
Testname: M101Q1P1T1P4

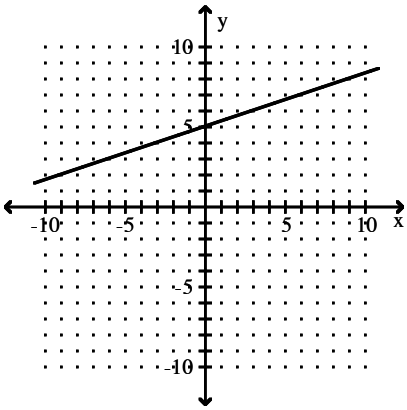
1) 3, –2, 0, 0.64
2) Rational numbers
3) Integers
4) Rational numbers
5)



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) $y = x + b$