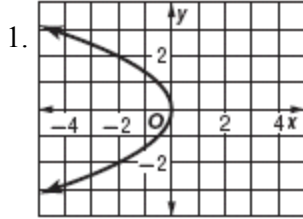


Ch. 2 Test 1

Subjective Short Answer

Determine whether each relation is a function and explain why or why not.



2. Find the domain and range of the relation $\{(-3, 3), (-3, 2), (-3, 1), (-3, 0)\}$. Then determine whether the relation is a function.

3. Write an equation in slope-intercept form for the line that has a slope of 2 and passes through $(1, -5)$.

4. Find the x -intercept and the y -intercept of the graph of $3y = 2x - 6$.

5. Write the equation $\frac{5}{2}x - 9 = 8y$ in standard form. Identify A , B , and C .

Ch. 2 Test 1

State whether each equation or function is linear. If no, explain your reasoning.

6. $f(x) = \frac{1}{x+3}$

7. What is the slope of a line that is perpendicular to the graph of $y = -3x$?

8. Write an equation in slope-intercept form for the line that passes through $(-2, 3)$ and is parallel to the line whose equation is $3x + 2y = 6$.

Multiple Choice___ 9. What is the slope of a line that is parallel to the graph of $2x + 3y = 5$?

- a.
- $\frac{3}{2}$
- b.
- $-\frac{3}{2}$
- c.
- $-\frac{2}{3}$
- d.
- $\frac{2}{3}$

___ 10. Write an equation in slope-intercept form for the line that has a slope of -4 and passes through $(1, 2)$.

- a.
- $y = -4x + 6$
- b.
- $y = -4x + 9$
- c.
- $y = -4x + 2$
- d.
- $y = -2x + 4$

___ 11. What is the slope of the line $y = -2$?

- a. 0 b.
- $\frac{1}{2}$
- c. undefined d.
- -2

___ 12. Find $f(-1)$ if $f(x) = \frac{x^2 - 4}{x + 2}$.

- a. 3 b.
- -3
- c. 1 d.
- -5

___ 13. Write an equation in slope-intercept form for the line that passes through $(1, -2)$ and $(3, 7)$.

- a.
- $y = \frac{2}{9}x - \frac{19}{3}$
- b.
- $y = \frac{9}{2}x - \frac{13}{2}$
-
- c.
- $y = \frac{9}{2}x - \frac{57}{2}$
- d.
- $y = \frac{2}{9}x + \frac{13}{9}$

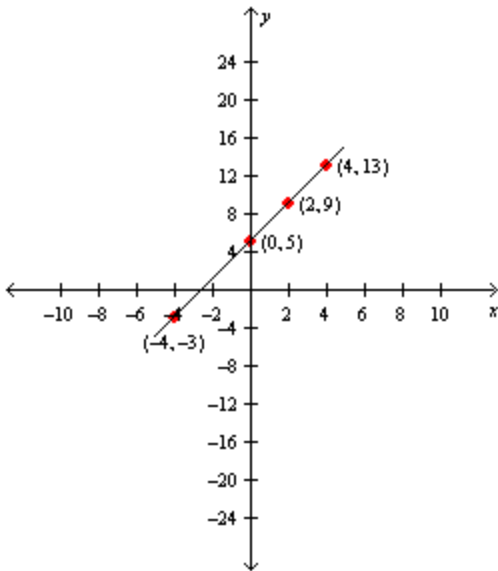
Ch. 2 Test 1

- ___ 14. Find the value of $f(-10)$ and $g(-1)$ if $f(x) = -4x - 7$ and $g(x) = 9x^2 - 23x$.
- a. $f(-10) = 4$ b. $f(-10) = -11$
 $g(-1) = -90$ $g(-1) = 15$
- c. $f(-10) = 47$ d. $f(-10) = 33$
 $g(-1) = -15$ $g(-1) = 32$

- ___ 15. Graph the given relation or equation and find the domain and range. Then determine whether the relation or equation is a function.

$y = 2x + 5$

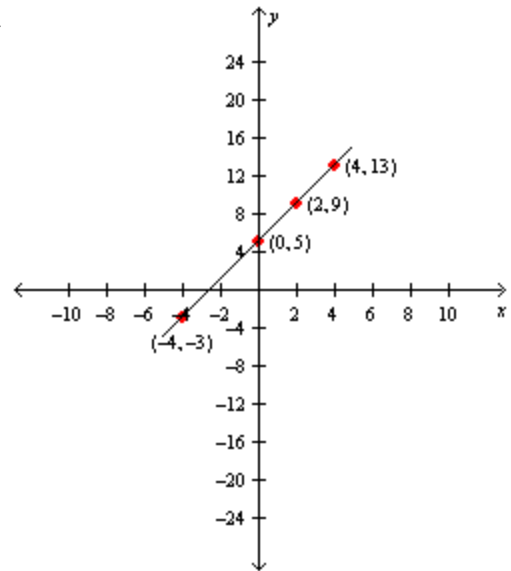
a.



The domain is $\{x / x < 5\}$ and the range is all real numbers.

The equation is not a function.

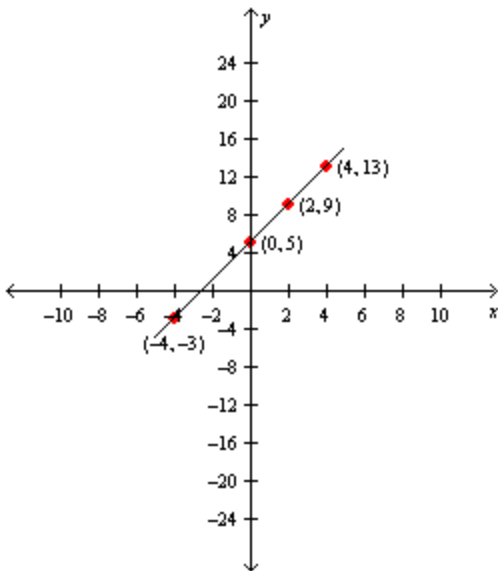
b.



The domain and the range are all real numbers.

The equation represents a function.

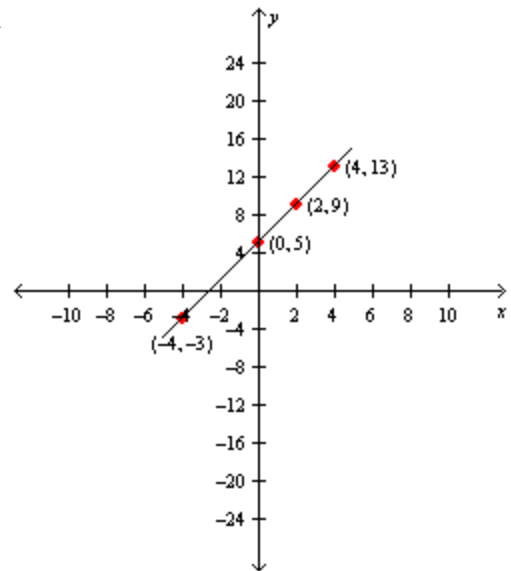
c.



The domain is $\{x / x > 5\}$ and the range is all real numbers.

The equation represents a function.

d.



The domain and the range are all real numbers.

The equation is not a function.

Ch. 2 Test 1

- ___ 16. Find the x -intercept and the y -intercept of the graph of $3x - 2y = 12$.
a. 4; -6 b. -6; 4 c. (2, -3) d. (4, -6)

Ch. 2 Test 1**Answer Key**

1. no
2. $D = \{-3\}$; $R = \{0, 1, 2, 3\}$; not a function
3. $y = 2x - 7$
4. x -intercept is 3; y -intercept is -2
5. $5x - 16y = 18$; $A = 5$, $B = -16$, $C = 18$
6. No, because a variable appears in the denominator.
7. $\frac{1}{3}$
8. $y = -\frac{3}{2}x$
9. c
10. a
11. a
12. b
13. b
14. d
15. b
16. a