

Algebra 1 TEST 9 REVIEW

Functions

Name _____

Date _____

1 If $f(x) = x^2 + 2x + 6$, what is the value of $f(x)$ when $x = 4$?

9

2 Which number is a zero of the function $f(x) = x^2 - x - 2$?

- A 5
- B 2
- C 0
- D -2

3 Given $f(x) = \frac{\sqrt{23-x}}{4}$, what is $f(7)$?

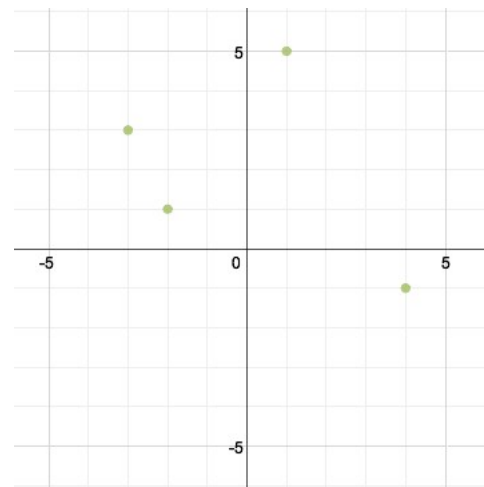
4 Given $g(x) = x^2 + 6x - 3$, which is the value of $g(-3)$?

5 What is the domain of $\{(-5, 3), (0, 4), (1, 6), (4, 8)\}$?

6 The elements of a function of x are $(-3, 4), (0, 6), (1, 2)$. What is the range of the function?

7 What is the range of $f(x) = x^2 - 6$ when the domain is $\{-3, -1, 2\}$?

8 Given $f(x) = x^2 + x - 1$, what is the range if the domain $\{-2, 0, 3\}$?



a.) What is the domain of the function shown?

b.) What is the domain of the function shown?

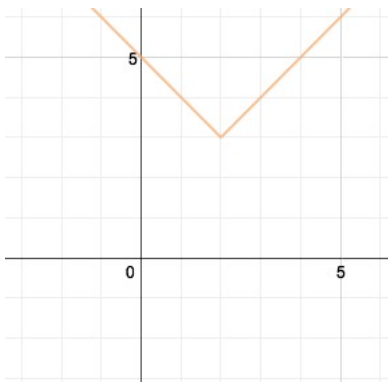
10 Which relation has a domain of $\{-2, 4, 6\}$?

- A $\{(-2, 1), (6, 5), (-2, 3), (6, 0)\}$
- B $\{(-2, 1), (-4, 5), (-2, 3), (6, 0)\}$
- C $\{(-2, 1), (4, 5), (2, 3), (6, 0)\}$
- D $\{(-2, 1), (4, 5), (-2, 3), (6, 0)\}$

11 The ordered pairs in the sets shown below are of the form (x, y) . In which set of ordered pairs is y NOT a function of x ?

- A $\{(-4, -7), (0, -7), (3, -6), (8, 6)\}$
- B $\{(-5, 6), (0, 4), (1, 5), (5, 8)\}$
- C $\{(4, -7), (1, 9), (0, -6), (-4, -8)\}$
- D $\{(-4, 2), (0, 7), (0, 9), (-4, -4)\}$

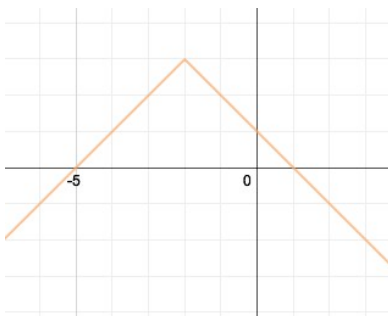
12



What is the Domain of this function?

What is the Range of this function?

13

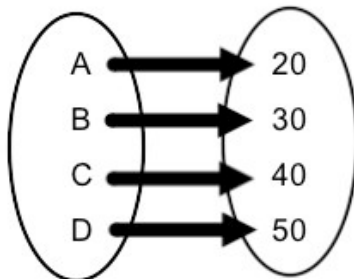


What is the Domain of this function?

What is the Range of this function?

14

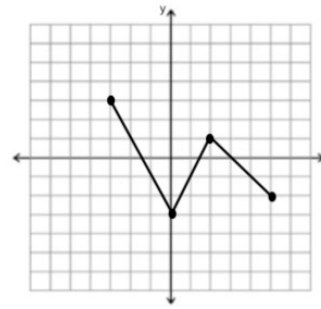
Given the following:



Domain?

Range?

15



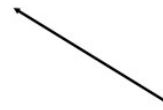
Domain?

Range?

16

Which of the following graphs are functions of x ?

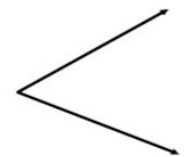
A



B



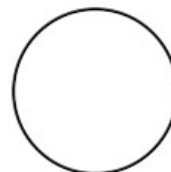
C



D



E



- 17 A function of x consists of five ordered pairs of the form (x, y) . Four of the ordered pairs are shown below.

$(-6, -8), (-2, -3), (2, 2), (6, 7)$

What is the 5th ordered pair of the function?

- 18 Which equation fits the data in the table?

x	-3	-1	1	3
y	-16	-4	8	20

- A $y = 2x + 6$
 B $y = 6x + 2$
 C $y = 2x - 6$
 D $y = 6x + 2$

- 19 Which table does NOT represent a function?

A

x	0	4	0	8
y	0	6	10	14

B

x	0	-1	2	1
y	0	2	4	8

C

x	5	10	-5	-10
y	0	2	4	6

D

x	-8	1	0	8
y	4	5	-6	-4

- 20 Name that property

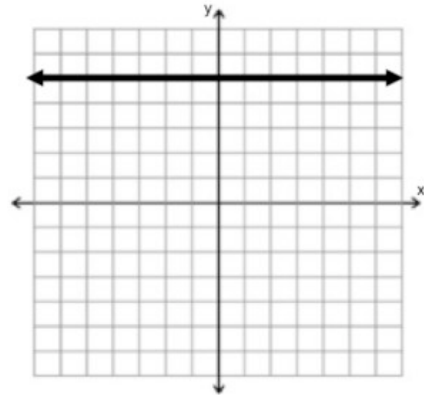
A $3x + 2 = 2 + 3x$

B If $8x = 16$
 $8x + 4 = 5x$
 $16 + 4 = 5x$

C $3(x + y) = 3x + 3y$

D $5 + 0 = 5$

- 21



Which equation best describes the line whose graph is shown?

- A $x = 5$
 B $y = 5$
 C $y = x + 5$
 D $y = 5x$

- 22 Which of the following equals $3x^2 - 5x - 2$ when completely factored?

- A $(3x - 1)(x - 2)$
 B $(3x - 1)(x + 2)$
 C $(3x + 1)(x - 2)$
 D $(3x + 1)(x + 2)$

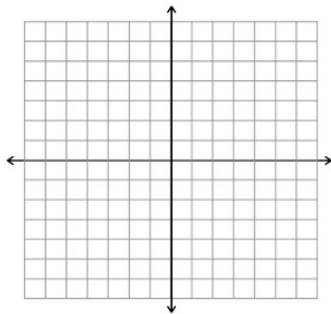
23 What is $\sqrt{72}$ in simplest form?

- A $8\sqrt{3}$
- B $2\sqrt{18}$
- C $3\sqrt{8}$
- D $6\sqrt{2}$

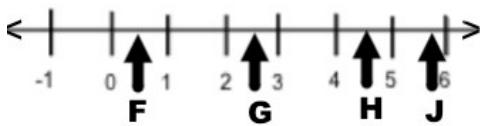
24 Simplify $2x^2(9x^2 + 3x + 1)$

25 What is the value of $2(x^2 + y^2)$ when $x = -2$ and $y = -3$?

26 Graph $y \geq -3x - 1$



27 Which labeled point on the number line is closest to the square root of $\sqrt{23}$?



- A F
- B G
- C H
- D J

28 What is the solution to the following equation

$$4(x + 2) + 5 = -3(x + 1)$$

29 Which of the following is a factored form of $x^2 - 5x - 50$?

- A $(x - 10)(x - 5)$
- B $(x - 10)(x + 5)$
- C $(x + 10)(x + 5)$
- D $(x + 10)(x - 5)$

30 Find the quotient of $(x^2 + x - 2)$ and $(x - 1)$.

- A $(x - 1)$
- B $(x + 1)$
- C $(x - 2)$
- D $(x + 2)$

31 Simplify the following expression. Assume the denominator does not equal zero.

$$\frac{6x^2 + 15x + 6}{x + 2}$$