



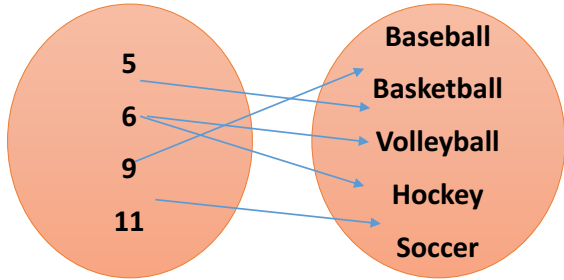
# Assessment

**Mathematics: Lesson22**



## Question 1

The diagram shows the relationship between number of players on a team and different sports. This is a function.



- A. True
- B. False

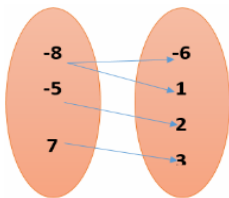
## Question 2

Which of the following sets is a Function?

A.

x	y
-4	0
-2	2
0	5
-2	-3
4	-5
6	7
8	10

C.



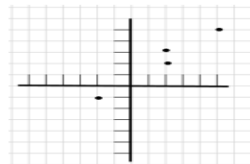
a. I

b. II

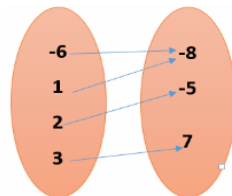
c. III

d. IV

B.



D.



## Question 3

Which of these relations choices represent a function?

A.  $\{(0,0), (2,5), (3,4), (2,0)\}$

B.  $\{(3,4), (0,5), (1,5), (2,6)\}$

C.  $\{(1,1), (3,4), (2,1), (3,5)\}$

D.  $\{(1,1), (2,1), (-3,5), (1,4)\}$

## Question 4

Given the relation  $D = \{(6, 4), (8, -1), (x, 7), (-3, -6)\}$ . Which of the following values for  $x$  will make relation  $D$  a function?

- A.  $-3$
- B.  $-6$
- C.  $8$
- D.  $6$

## Question 5

Which relation is **not** a function?

A.  $\{(2,5), (3,6), (4,7), (5,8)\}$

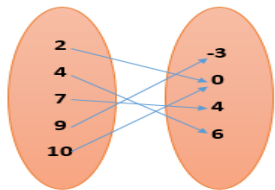
B.  $\{(-1,5), (-2,5), (-3,5), (-4,5)\}$

C.  $\{(6,-2), (-4,6), (-2,4), (1,0)\}$

D.  $\{(0,-2), (1,0), (-1,-3), (0,-1)\}$

## Question 6

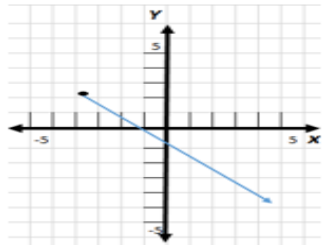
Identify the range of this relation.



- A.  $\{-3, 4, 6\}$
- B.  $\{4, 7, 9\}$
- C.  $\{-3, 0, 4, 6\}$
- D.  $\{2, 4, 7, 9, 10\}$

## Question 7

Determine the range of the following relation.



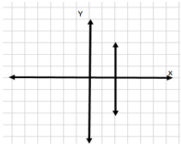
- A.  $(-\infty, \infty)$
- B.  $(-\infty, 2]$
- C.  $[-4, \infty)$
- D.  $(2, \infty]$



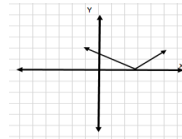
## Question 8

Use the vertical line test to determine which of the following is a function?

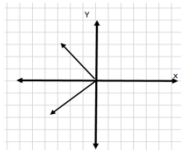
A.



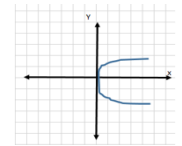
B.



C.



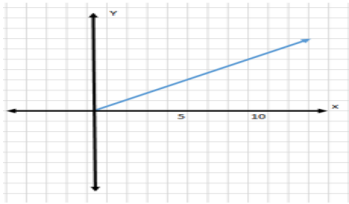
D.



- a. I
- b. II
- c. III
- d. IV

## Question 9

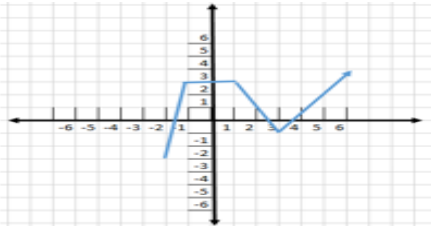
Determine the domain (D) and range (R) of this graph.



- A. Domain=  $\mathbb{R}$ ; Range=  $y \geq 0$
- B. Domain =  $x \geq 0$ ; Range=  $y \geq 0$
- C. Domain =  $x \geq 0$ ; Range =  $y = R$
- D. Domain =  $\mathbb{R}$ ; Range =  $R$

## Question 10

Identify the intervals where the function is changing as constant.



- A.  $(2, \infty)$
- B.  $(1, 2)$
- C.  $(-1, 1)$
- D.  $(-2, -1)$



# Assessment

**Mathematics: Lesson23**



## Question 1

All the ordered pairs in the table lie on the line given by the equation  $y = 3x + 4$ .

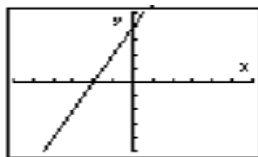
x	y
1	7
2	10
3	13

- A. True
- B. False

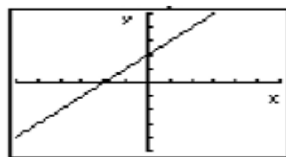
## Question 2

Which graph shows the line  $y = 2x + 4$ ?

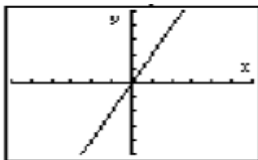
A.



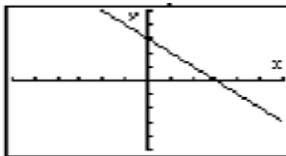
B.



C.



D.

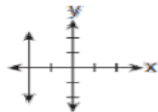


- a. I
- b. II
- c. III
- d. IV

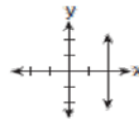
### Question 3

Which graph represents the equation  $y = -2$ ?

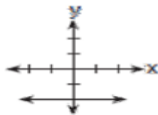
A.



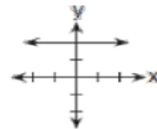
B.



C.



D.

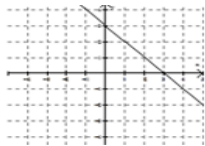


- a. I
- b. II
- c. III
- d. IV

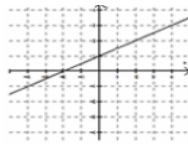
## Question 4

Which line is the graph of the equation  $y = -x + 3$  ?

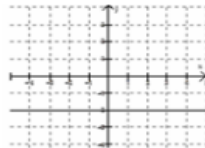
A.



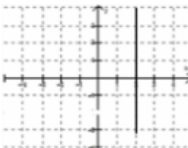
B.



C.



D.



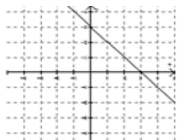
- a. I
- b. II
- c. III
- d. IV



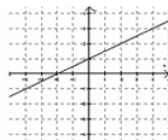
## Question 5

Which graph has a positive slope?

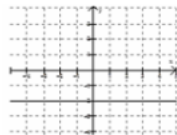
A.



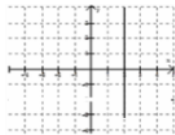
B.



C.



D.



- a. I
- b. II
- c. III
- d. IV

## Question 6

What is the slope of a line that passes through points  $(5, -4)$  and  $(1, 0)$ ?

a.  $-1$

b.  $1$

c.  $\frac{2}{3}$

d.  $-\frac{4}{6}$

## Question 7

What is the  $y$ -intercept of the line whose equation is  $7x - 3y = 42$ ?

A. 6

B.  $\frac{7}{3}$

C. 45

D.  $-14$

## Question 8

Find the slope of this equation  $3x - 4y = 8$

A. 3

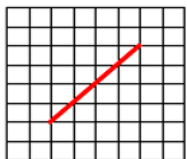
B. -4

C.  $\frac{3}{4}$

D. 8

## Question 9

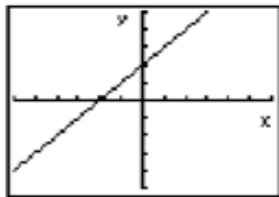
Find the slope of this line



- A. 4
- B.  $-1$
- C.  $-2$
- D. 1

## Question 10

Find the equation for this line.



- A.  $y = 2x$
- B.  $y = 3$
- C.  $y = 2x + 3$
- D.  $y = x + 2$



# Assessment

**Mathematics: Lesson24**



## Question 1

Which equation represents a line parallel to the  $y$ -axis?

A.  $x = 5$

B.  $y = 10$

C.  $x = \frac{1}{3}y$

D.  $y = 5x + 17$



### Question 3

Determine the slope and the point at which the equation  $x + y - 7 = 0$  intercepts the  $y$ -axis.

- A.  $m = -1; (0, 7)$
- B.  $m = 1; (0, 7)$
- C.  $m = -1; (0, -7)$
- D.  $m = 0; (0, 7)$

## Question 5

What is the equation of the line that has a slope of 4 and passes through the point (3, -10)?

A.  $y = 4x - 22$

B.  $y = 4x + 22$

C.  $y = 4x - 43$

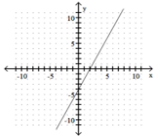
D.  $y = 4x + 43$

## Question 7

Graph the equation of  $2x + y = 4$  by using the slope and  $y$ -intercept

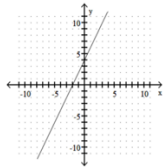
I

A.

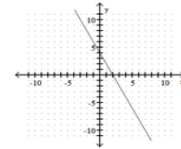


C.

III



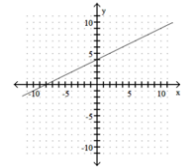
B.



II

IV

D.



- a. I
- b. II
- c. III
- d. IV

## Question 9

Write the slope-intercept form of the equation that passes through points  $(-3, 0)$  and  $(0, -7)$ .

A.  $y = \frac{7}{3}x - 7$

B.  $y = -\frac{3}{7}x - 7$

C.  $y = -\frac{7}{3}x - 7$

D.  $y = \frac{3}{7}x - 7$

## Question 11

What is the slope of a line parallel to the line  $y = \frac{2}{3}x - 6$ ?

A.  $\frac{2}{3}$

B.  $-\frac{3}{2}$

C. 6

D.  $\frac{1}{6}$

## Question 13

Which of these equation is parallel to  $3x - 5y = 10$  ?

A.  $y = -\frac{3}{5}x + 5$

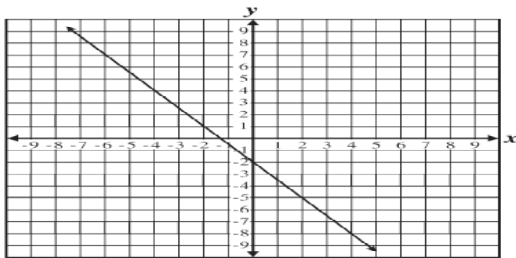
B.  $y = 2x - 7$

C.  $y = 2x + \frac{3}{5}$

D.  $y = \frac{3}{5}x$

## Question 15

What is the slope of a line parallel to the line below?



- A.  $-\frac{3}{2}$
- B.  $-\frac{2}{3}$
- C.  $\frac{2}{3}$
- D.  $\frac{3}{2}$

## Question 17

What is the equation of the line perpendicular to  $2x + 5y + 7 = 0$  that has a  $y$ -intercept of  $-3$ .

A.  $2y - 5x + 6 = 0$

B.  $5x + 2y - 6 = 0$

C.  $5x - 2y - 6 = 0$

D.  $5x - y - 6 = 0$



## Question 19

Write the equation of the line perpendicular to  $y + 5x = 7$  and passes through the point  $(10, -4)$  ?

A.  $y = \frac{1}{5}x + 7$

B.  $y = 5x + \frac{25}{4}$

C.  $y = \frac{1}{5}x - 6$

D.  $y = 5x + 7$



# Assessment

**Mathematics: Lesson25**



## Question 1

Find  $f(x) + g(x)$

$$f(x) = 6 - 8x \quad g(x) = -4x + 8$$

- A.  $-12x + 14$
- B.  $-4x + 6$
- C.  $2x$
- D.  $-4x + 14$

## Question 2

Find  $f(x) \cdot g(x)$

$$f(x) = 3x \quad g(x) = x^2 + 1$$

A.  $9x^2 + 3x$

B.  $9x^2 + 1$

C.  $3x^3 + 1$

D.  $3x^3 + 3x$

### Question 3

Find  $f(x) \cdot g(x)$  and its domain

$$f(x) = 3x + 2 \quad g(x) = 7x + 6$$

- A.  $21x^2 + 32x + 12$ ; all real numbers
- B.  $21x^2 + 32x + 12$ ; all real numbers except  $x = -\frac{6}{7}$
- C.  $6x^2 + 4x + 42$ ; all real numbers
- D.  $6x^2 + 4x + 42$ ; all real numbers except  $x = -\frac{2}{3}$

## Question 4

Find  $f(x) - g(x)$

$$f(x) = 3x + 2 \quad g(x) = x - 3$$

A.  $2x - 5$

B.  $4x - 1$

C.  $2x + 5$

D.  $2x - 1$

## Question 5

Find  $f(x) \cdot g(x)$  and its domain.

$$f(x) = 4x + 7 \quad g(x) = 3x^2$$

- A.  $12x + 21$ ; *domain*  $(-\infty, \infty)$
- B.  $12x^2 + 21$ ; *domain*  $(-\infty, \infty)$
- C.  $3x^2 + 4x + 7$ ; *domain*  $(-\infty, \infty)$
- D.  $12x^3 + 21x^2$ ; *domain*  $(-\infty, \infty)$

## Question 6

Find  $\frac{3f(x)}{g(x)}$  and its domain

$$f(x) = 3x^2 + 10x - 8 \quad g(x) = x + 4$$

- A.  $3x + 2$ ; all real numbers except  $x = 4$
- B.  $-9x + 6$ ; all real numbers except  $x = 4$
- C.  $-3x + 2$ ; all real numbers except  $x = -4$
- D.  $9x - 6$ ; all real numbers except  $x = -4$



## Question 7

Find  $(f \circ g)(x)$ .

$$f(x) = 7x + 9 \quad g(x) = 4x - 1$$

- A.  $28x + 2$
- B.  $28x + 8$
- C.  $28x + 16$
- D.  $28x + 35$

## Question 8

Find  $g(f(x))$

$$f(x) = 2x + 6 \quad g(x) = 4x + 2$$

- A.  $8x + 26$
- B.  $8x + 10$
- C.  $6x + 8$
- D.  $6x + 12$

## Question 9

If  $f(x) = 2x + 10$  and  $g(x) = x^2 + 3$ , evaluate  $\left(\frac{g}{f}\right)(2)$

- A. 21
- B. 98
- C.  $\frac{1}{2}$
- D. 2

## Question 10

If  $f(x) = x^2$  and  $g(x) = x - 3$ , what is  $(f \circ g)(5)$ ?

- A. 4
- B. 22
- C. 27
- D. 50