RELATIONS AND FUNCTIONS

TYPES OF FUNCTION AND ALGEBRA OF REAL FUN

EXERCISE

Q.1 In a function from set A to set B, every element of set A has_____ image in set B.

(a) one and only one (b) different

(c) same (d) many

Q.2 In a function from set A to set B, image can have more than one preimage.

(a) True

(b) False

Q.3 Let R be a relation defined on set of natural numbers {(x, y): y=2x}. Is this relation can be called a function?

(a) True

(b) False

Q.4 Which of the following is not a function?

(a) {(1,2), (2,4), (3,6)} (b) {(-1,1), (-2,4), (2,4)}

(c) {(1,2), (1,4), (2,5), (3,8)} (d) {(1,1), (2,2), (3,3)}

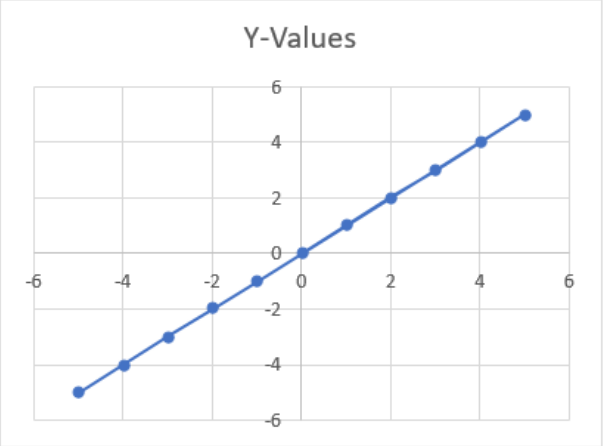
Q.5 Which function is shown in graph?

(a) Constant

(b) Modulus

(c) Identity

(d) Signum function



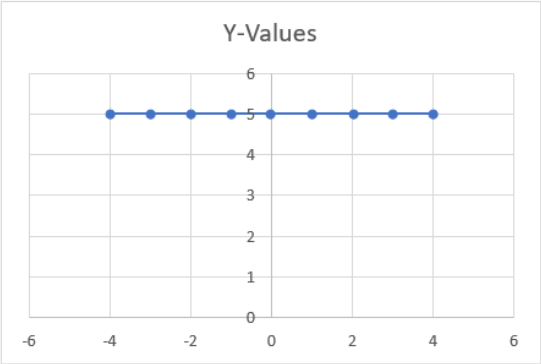
Q.6 Which function is shown in graph?

(a) Constant

(b) Modulus

(c) Identity

(d) Signum function



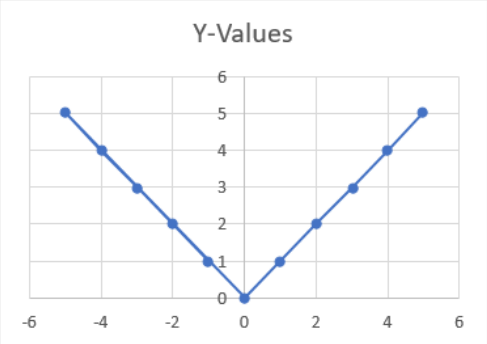
Q.7 Which function is shown in graph?

(a) Constant

(b) Modulus

(c) Identity

(d) Signum function



Q.8 f(x) = {|x|x for x≠0 and 0 for x=0}. Which function is this?

(a) Constant (b) Modulus

(c) Identity (d) Signum function

Q.9 Find domain of function |x|.

(a) Set of real numbers (b) Set of positive real numbers

(c) Set of integers (d) Set of natural numbers

Q.10 Find range of function |x|.

(a) Set of real numbers (b) Set of positive real numbers

(c) Set of integers (d) Set of natural numbers

Q.11 $f(x) = \sqrt{9 - x^2}$ Find the domain of the function.

(a) (0,3) (b) [0,3]

(c) [-3,3] (d) (-3,3)

Q.12 f(x) = $\sqrt{9 - x^2}$. Find the range of the function.

(a) R (b) R^+

(c) [-3,3] (d) [0,3]

ANSWER KEY

1. (a)

2. (a)

3. (a)

4. (c)

5. (c)

6. (a)

7. (b)

8. (d)

9. (a)

10. (b)

11. (c)

12. d