Exercise Set 2.7: Functions and Graphs

Determine whether or not each of the following graphs represents a function.

1.

2.

3.

4.

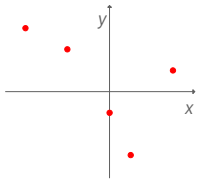
5.

6.

7.

8.

9.



10.

For each set of points,

(a) Graph the set of points.

(b) Determine whether or not the set of points represents a function. Justify your answer.

11. $\{(1, 5),\ (2, 4),\ (-3, 4),\ (2, -1),\ (3, 6)\}$

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Exercise Set 2.7: Functions and Graphs

Answer the following.

17. The graph of $y = f(x)$ is shown below.

(a) Find the domain of the function. Write your answer in interval notation.

(b) Find the range of the function. Write your answer in interval notation.

(c) Find the following function values:
$f(-2);\ f(0);\ f(4);\ f(6)$

(d) For what value(s) of x is $f(x) = 9$?

18. The graph of $y = g(x)$ is shown below.

(a) Find the domain of the function. Write your answer in interval notation.

(b) Find the range of the function. Write your answer in interval notation.

(c) Find the following function values:
$g(-2);\ g(0);\ g(1);\ g(3);\ g(6)$

(d) For what value(s) of x is $g(x) = -2$?

19. The graph of $y = g(x)$ is shown below.

(a) Find the domain of the function. Write your answer in interval notation.

(b) Find the range of the function. Write your answer in interval notation.

(c) Find the following function values:
$g(-2);\ g(0);\ g(2);\ g(4);\ g(6)$

(d) Which is greater, $g(-2)$ or $g(3)$?

20. The graph of $y = f(x)$ is shown below.

(a) Find the domain of the function. Write your answer in interval notation.

(b) Find the range of the function. Write your answer in interval notation.

(c) Find the following function values:
$f(-3);\ f(-2);\ f(-1);\ f(1);\ f(4)$

(d) Which is smaller, $f(0)$ or $f(3)$?

Exercise Set 2.7: Functions and Graphs

For each of the following functions:

(a)