

Exercise Set 2.7: Functions and Graphs

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

1.

2.

3.

4.

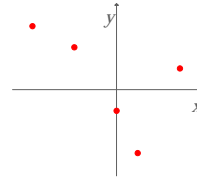
5.

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 $f(x) = 9$?

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 $g(3)$?

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 $g(x) = -2$?

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)