

An Introduction to Functions

1. Determine whether each relation represents a function. State the domain and the range of each relation.

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

2. Determine whether each relation represents a function. State the domain and the range of each relation.

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

3. Determine whether each relation represents a function. State the domain and the range of each relation.

$$\{(8,3), (5,3), (3,3)\}$$

4. Determine whether each equation shows y as a function of x

$$y = 2x + 1$$

5. Determine whether each equation shows y as a function of x

$$5x + 2y = 7$$

6. Determine whether each equation shows y as a function of x

$$y = \pm 3x$$

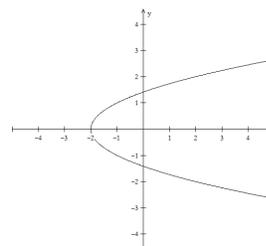
7. Determine whether each equation shows y as a function of x

$$y = x^5 - 1$$

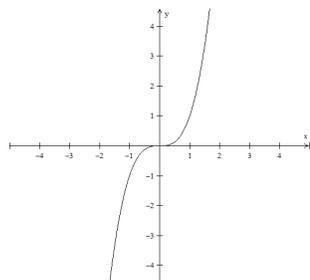
8. Determine whether each equation shows y as a function of x

$$y^2 = x + 1$$

9. Determine whether the graph is that of a function.



10. Determine whether the graph is that of a function.



11. Find the following values for each function.

$$f(x) = 4x - 1$$

$$\begin{array}{cccc} f(0) & f(3) & f(-2) & f(-x) \\ -f(x) & f(x+2) & f(2x) & f(x+h) \end{array}$$

12. Find the value of each function

$$f(x) = -3x^2 - 5x + 2, f(-2)$$

13. Find the value of each function

$$h(q) = \frac{4q^2}{q-3}, h(-5)$$