

1. Write the definition of a **function**, in a complete sentence.
2. Write the definition of the **domain** of a function, in a complete sentence.
3. Write the definition of the **range** of a function, in a complete sentence.

The domains  $D$  of functions are given. Find the range of each function.

4.  $f(x) = 6x - 2$ ;  $D = \{-3, 1, 5\}$

5.  $h(x) = x^2 + 3x$ ;  $D = \{-3, -1, 2\}$

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6.  $R = \{7, 11, 32\}$

8. -14      9. 17

7.  $R = \{1, 6\}$

10. -9      11. 13

12. 9

13. 5

The domains  $D$  of functions are given. Find the range of each function.

6.  $g(x) = x^2 + 7; D = \{-5, 0, 2\}$

7.  $f(x) = |x + 4| - 2; D = \{-7, -1, 4\}$

For the problems below, use these functions.

$$f(x) = 3x - 5$$

$$g(x) = x^2 - 2x + 6$$

$$h(x) = |2 - x|$$

8.  $4f(3) - g(6)$

9.  $g(-3) - \frac{1}{2}h(10)$

10.  $6f(1) + h(5)$

11.  $f(g(0))$

12.  $g(h(5))$

13.  $h(f(4))$

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1. A function is a relationship between two sets of numbers. For every input, there is exactly one output.
  2. The domain is the set of numbers that can go into the function.
  3. The range is the set of numbers that come out of the function.

4.  $R = \{-20, 4, 28\}$

5.  $R = \{-2, 0, 10\}$