

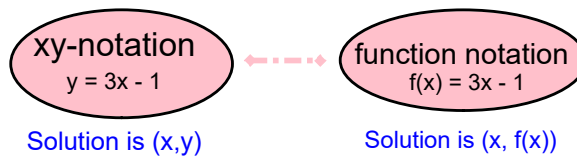
Section 1.2 - Input - Output of a Function

Learning Goal:

By the end of today I will be able to input values into a function and calculate the appropriate output values, and recognize these values as coordinates on a graph.

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WORKING WITH FUNCTION NOTATION



$f(x)$ is function notation

$f(x) = y$

$f(x)$ is said "f of x"

We can use any variables to denote a function

Examples include...

$f(x)$, $g(x)$, $V(t)$, $D(s)$, $h(t)$

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Function notation is used when we want to substitute values in for the independent variable.

- ① Given $f(x) = x^2 - 3x + 1$, find the value of $f(x)$ when $x=2$ and, -3 .

$$\begin{aligned} f(2) &= (2)^2 - 3(2) + 1 \\ &= 4 - 6 + 1 \\ &= -1 \end{aligned}$$

(2,-1) is a point on the graph.

$$\begin{aligned} f(-3) &= (-3)^2 - 3(-3) + 1 \\ &= 9 + 9 + 1 \\ &= 19 \end{aligned}$$

(-3,19) is a point on the graph.

- ② $f(x) = 2x - 6$

$$f(2) =$$

$$f(-1) =$$

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- ③ $f(x) = 3x^2 - 5$ ④ $g(x) = (x + 1)^2 - 2$

$$f(1) =$$

$$g(4) =$$

$$f(-2) =$$

$$g(-2) =$$

- ⑤ $h(x) = (x - 3) / 2$

$$h(0) =$$

$$h(7) =$$

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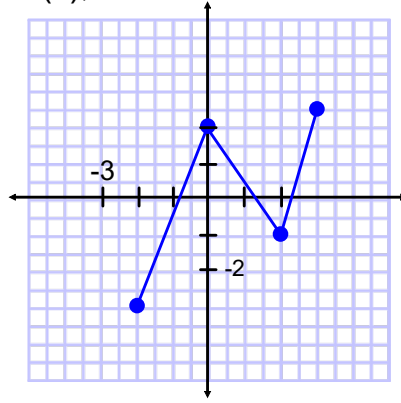
6 Given the graph of $f(x)$, state:

$$f(-2) =$$

$$f(0) =$$

$$f(2) =$$

$$f(3) =$$



7 If $g(x) = 2x^2 - 5$, find the following:

$$g(m) =$$

$$g(2x) =$$

$$g(x^2) =$$

$$g(5) - g(3) =$$

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Homework

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