

What is the area of the rectangle?

$$\text{Area} = LW$$

Independent Variable

Variable

Dependent Variable

L	W	A
2	5	10
5	2	10
7	4	28
9	3	27

$$A = LW$$

$$A = \pi r^2$$



$$y = 2 + x$$

1. $y = 2 \pm \sqrt{x}$ → Relation
2. $y = 3x^2 + 4$ → Function

①

x	y
0	2
1	3, 1
4	4, 0
9	5, -1

②

x	y
0	4
1	7
-2	16
4	52

$$y = f(x)$$

y is a function of x, that is, "x" is an independent variable while "y" is a dependent variable.

$$y = f(x) = x^2 + 3$$

Here, "0" is called a pre-image of "3" and "3" is called the image of "0" under the function "f".

$$f(0) = 3, f(2) = 7$$

$$f(-1) = 4$$

'x'	'f(x)' or 'y'
0	3
-1	4
2	7
3	12
5	28

Domain:

Set of all allowable values of independent variable (pre-images).

Range:

Set of all possible values of dependent variable (images).

Vertical Line Test:

1. $y = x + 2$
2. $y = \pm \sqrt{x}$

