

What is a function?

Relation: A set of ordered pairs

Function: each input has exactly 1 output

Domain: x-values; input

Range: y-values; output

*Vertical Line Test

The graph can only touch one point on the vertical line at a time

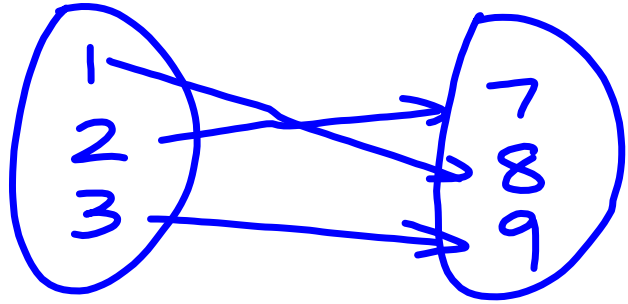


Function Notation:

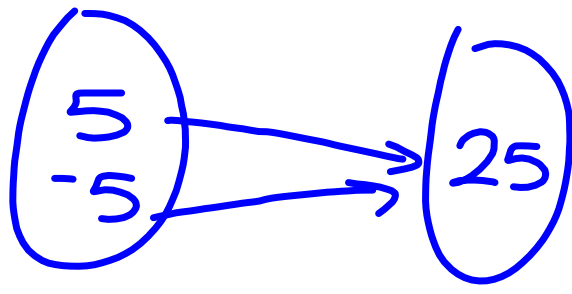
$$f(x) = y$$

"f of x"

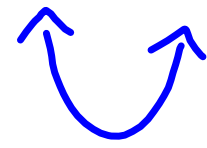
Input Output



(1,8) (2,7) (3,9)



$$f(x) = x^2$$
$$(5)^2 = 25$$
$$(-5)^2 = 25$$



$$1. D: 4, 8, 12, 16$$

$$R: 41, 49, 58, 67$$

$$4. a. f(3) = 4x - 7$$
$$4(3) - 7$$
$$12 - 7$$

$$8.) f(x) = 2x + 7$$
$$2(5) + 7$$
$$10 + 7$$
$$2(18) + 7$$
$$36 + 7 = 43$$

$$\{ 5, 18, 53 \}$$
$$17, 42$$