Functions

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Introduction

Definition: A Function is correspondence between input numbers $x - values$
and output numbers $y - values$ than sends each input number $x - value$ to
exactly one output number $y - value$

Sometimes a function is described with an equation

Example: $y = x^2 + 1$ which can also be written as $f(x) = x^2 + 1$

What is? f(2)?

solution: put 2 in $f(x) = x^2 + 1$

$$f(2) = 2^2 + 1$$

$$f(2) = 4 + 1$$

$$f(2) = 5$$

what is f(a+3)?
put $a + 3$ into f

$$f(a + 3) = (a + 3)^2 + 1$$

$$f(a + 3) = a^2 + 3^2 + 2.a.3 + 1$$

$$f(a + 3) = a^2 + 9 + 6a + 1$$

$$f(a + 3) - a^2 + 6a + 10$$