Functions

* Function – a special relationship where each input has a single output

$y = 3x + 2$ where $x = 2$

$3(2) + 2$

$y = 8$

* Function Notation: $f(x) = y$

Function Name | Input | Output

REMINDERS

$(-3)^2 = 9$

$(2x)^3 = (2x)(2x)(2x)$

$= 8x^3$

$(2x)^3$

$= 2^3 x^3$

$= \boxed{8x^3}$

Examples:

$f(2) = 3x + 2$

$3(2) + 2$

$6 + 2$

$\boxed{f(2) = 8}$

$f(4) = \frac{1}{2}x - 4$

$\frac{1}{2}(4) - 4$

$= 2 - 4$

$\boxed{f(4) = -2}$

$g(-6) = x^2 - 2x + 3$

$(-6)^2 - 2(-6) + 3$

$= 36 + 12 + 3$

$\boxed{g(-6) = 51}$

$h(x-2) = 3x + 6$

$3(x-2) + 6$

$= 3x - 6 + 6$

$\boxed{h(x-2) = 3x}$