

DEC 12/07

FUNCTION NOTATION

Ex #1 IF $f(x) = x^2 + 3$ WHAT
IS $f(5)$?

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

$$f(5) = (5)^2 + 3$$

$$f(5) = 28$$

Ex #2 IF $f(x) = 3^x$ AND
 $g(x) = x + 2$ WHAT IS

$$f(2)$$

$$f(x) = 3^x$$

$$f(2) = 3^2$$

$$f(2) = 9$$

$$g(-3)$$

$$g(x) = x + 2$$

$$g(-3) = -3 + 2$$

$$g(-3) = -1$$

Find $f(g(2))$

$$g(x) = x + 2 \quad f(x) = 3^x$$

$$g(2) = 2 + 2 \quad f(4) = 3^4$$

$$g(2) = 4 \quad f(4) = 81$$

$$f(g(2)) = 81$$

Ex #3 If $f(x) = 3x + 4$ AND
 $g(x) = x^2 - 1$ Find $g(f(6))$

$$\begin{aligned} f(x) &= 3x + 4 & g(x) &= x^2 - 1 \\ f(6) &= 3(6) + 4 & g(22) &= 22^2 - 1 \\ f(6) &= 18 + 4 & g(22) &= 483 \\ f(6) &= 22 \end{aligned}$$

$$g(f(6)) = 483$$