Function Notation

What is Function Notation?

- Function notation is just another way to write an equation
- An example of what it looks like: $f(x) = x + 4$

$y = x + 4$

Evaluating Expressions Written in Function Notation

If g(x) = -3x - 4, find each value

1. g(0)

$-3(0)-4$

$= -4$

2. g(-3)

$-3(-3)-4$

$= 5$

3. g(2x - 1)

$-3(2x-1)-4$

$-6x+3-4$

$-6x-1$

If $f(a) = 3a^2 - 2a$, find each value

4. f(2)

$3(2)^2 - 2(2)$

8

5. f(-3x)

$3(-3x)^2 - 2(-3x)$

$3(9x^2) + 6x$

$27x^2 + 6x$

6. -3[f(4)]

$-3[3(4)^2 - 2(4)]$

$-3[40] = -120$

If $f(x) = 2x + 4$ and $g(x) = x^2 + 5x + 4$, find each value

7. g(-12)

$(-12)^2 + 5(-12) + 4$

$= 88$

8. -3[f(8)]

$-3[2(8) + 4]$

$-3[20] = -60$

9. f(g(4))

$g(4) \rightarrow (4)^2 + 5(4) + 4$

$= 16 + 20 + 4$

$= 40$

$f(40) \rightarrow 2(40) + 4$

$80 + 4$

84

10. g(f(-1))