

### 1.3 - Working with Function Notation

- $f(x)$  is called function notation and is read " $f$  at  $x$ " or " $f$  of  $x$ ."
- $f(x)$  represents the value of the dependent variable ( $y$ ) for a given value of the independent variable ( $x$ ). So,  $y = f(x)$ .
- $f(3)$  represents the value of the function when  $x$  is 3. So  $(3, f(3))$  is an ordered pair on the graph.

Example 1: Given  $f(x) = 2x^2 + 3x - 1$ , evaluate

a)  $f(3)$

b)  $f(1/2)$

c)  $f(5 - 3)$

d)  $f(5) - f(4)$

Example 2: If  $g(x) = 2x^2 - 3x + 5$ , determine

a)  $g(m)$

b)  $g(3x)$

Example 3: The relationship between the selling price,  $s$ , of a pair of sunglasses and the revenue,  $R(s)$ , is represented by the function

$$R(s) = -10s^2 + 800s + 120.$$

a) Determine the revenue when the selling price is \$5.

b) Explain what  $R(20) = 12\,120$  means.

HW pg.32 #1-8, 10, Challenge: #13
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