

**Evaluating Derivatives Using the Graphing Calculator**

Find the derivative of the function at the given point.

1)  $f(x) = 2x^2 + x - 1, x = 3$

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

3)  $f(x) = \frac{1}{x^2}, x = 2$

Evaluate  $f'(-2), f'(-1), f'(0), f'(3), f'(5)$  for the following functions.

4)  $f(x) = -x^2 + 5$

5)  $f(x) = x + \frac{4}{x}$

Find an equation of the tangent line to the graph of  $f$  at the given  $x$ -value.

6)  $f(x) = x^3, x = 2$

7)  $f(x) = \sqrt{x-1}, x = 5$

8)  $f(x) = \frac{1}{x+1}, x = 0$

9) Find an equation of the line that is tangent to the graph of  $f(x) = x^3 + 2$  and parallel to  $3x - y - 4 = 0$ .