

## Using Derivative Formulas

### Part 1: Review

**Example 1:**  $\frac{d}{dx} \frac{1}{4}$

**Example 2:**  $\frac{d}{dx} \frac{x^4}{4}$

**Example 3:**  $\frac{d}{dx} (x^3 - 5x^2 + 1)(x^5 - 3)$

**Example 4:**  $\frac{d}{dx} \frac{1+x^2-x^4}{1+x^4}$

**Part 2: Combining Derivative Formulas**

**Example 5:**  $\frac{d}{dx} \frac{5}{3} x^3 (4x^5 - 5)^3$

**Example 6:**  $\frac{d}{dx} (5x^3 + 1)(x^4 + 5x)^2$

**Example 7:**  $\frac{d}{dq} ((q^3 + q)(q^2 - 7q))^3$

**Example 8:**  $\frac{d}{dx} \left( \frac{2x-1}{x^2+x} \right)^4$

**Example 9:**  $\frac{d}{dx} \frac{\sqrt[3]{2x-1}}{2x+1}$

**Example 10:**  $\frac{d}{dx} x^4 \cdot \sqrt[3]{4x^3 + 2x}$