

1. Find the derivative of  $f(x) = 4x^2 + 2x - 3$ .

2. Find the derivative of  $g(x) = \sqrt{x} - \frac{2}{x^3}$ .

3. Find the derivative of  $h(t) = t^3(4t - 2)$ .

4. Find  $\frac{d}{dx}(5x + 1)\sqrt{x}$ .

5. Find  $\frac{d}{dx} \frac{5x + 1}{x}$ .

6. Find  $\frac{d}{dx} \frac{3x^4 + x^{1/5}}{x^2 - 4}$ .

7. Find  $\frac{d}{dx} \frac{1}{\sqrt{x}}$ .

8. Find  $\frac{d}{dx} x^2 \sin(x)$ .

9. Find  $\frac{d}{dx} \frac{x^3}{\cos(x)}$ .