

Derivatives

Find the derivative of each of the following functions:

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

2. $f(t) = 10t^3 - 9t^2 + 8t - 7$

3. $f(r) = \frac{1}{2}r^{100} + \frac{1}{3}r^{50} - \pi r^{10} + e$

4. $f(x) = 2\sqrt{x} + 6\sqrt[3]{x} + 9x^\pi - \sqrt{2}x^{\sqrt{2}}$

5. $f(x) = \frac{5x^4 - 3x^2 + 1}{x^2}$