

Topic 6: Polynomials

Find the derivative of each function.

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

2. $f(t) = 3t^3 - 2\sqrt{t}$

3. $f(x) = \frac{3}{x} - 8x + e$

4. $h(x) = \frac{10}{\sqrt{x}} - 2x$

5. $f(s) = 2s^{3/2} - 3s^{-1/3}$

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

Answers

1) $f'(x) = 3x^2 - 2$

2) $f'(t) = 9t^2 - \frac{1}{\sqrt{t}}$

3) $f'(x) = -\frac{3}{x^2} - 8$

4) $h'(x) = -5x^{-3/2} - 2$

5) $f'(s) = 3s^{1/2} + s^{-4/3}$

6) $f'(x) = \frac{3}{2} - \frac{1}{2}x^{-2}$