



## Basic Derivatives - Negative Fractional Power with Coefficient to Derivative

1 Find the derivative  $f'(x)$  using the power rule.

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

A  $f'(x) = 2x^{-\frac{1}{3}}$       B  $f'(x) = 2x^{-\frac{4}{3}}$

C  $f'(x) = -6x^{-\frac{4}{3}}$       D  $f'(x) = 2x^{\frac{2}{3}}$

2 Find the derivative  $f'(x)$  using the power rule.

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

A  $f'(x) = 3x^{-\frac{4}{3}}$       B  $f'(x) = -x^{-\frac{4}{3}}$

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

3 Find the derivative  $f'(x)$  using the power rule.

$$f(x) = -5x^{-\frac{1}{2}}$$

A  $f'(x) = \frac{5}{2}x^{-\frac{3}{2}}$       B  $f'(x) = -5x^{-\frac{3}{2}}$

C  $f'(x) = \frac{5}{2}x^{\frac{1}{2}}$       D  $f'(x) = \frac{5}{2}x^{-\frac{1}{2}}$

4 Find the derivative  $f'(x)$  using the power rule.

$$f(x) = 9x^{-\frac{5}{2}}$$

A  $f'(x) = -\frac{45}{2}x^{-\frac{5}{2}}$       B  $f'(x) = -\frac{45}{2}x^{-\frac{3}{2}}$

C  $f'(x) = -\frac{45}{2}x^{-\frac{7}{2}}$       D  $f'(x) = 9x^{-\frac{7}{2}}$

5 Find the derivative  $f'(x)$  using the power rule.

$$f(x) = 9x^{-\frac{5}{3}}$$

A  $f'(x) = -15x^{-\frac{5}{3}}$       B  $f'(x) = -15x^{\frac{8}{3}}$

C  $f'(x) = 9x^{-\frac{8}{3}}$       D  $f'(x) = -15x^{-\frac{2}{3}}$

6 Find the derivative  $f'(x)$  using the power rule.

$$f(x) = -9x^{-\frac{2}{3}}$$

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

C  $f'(x) = 6x^{-\frac{5}{3}}$       D  $f'(x) = -9x^{-\frac{5}{3}}$

7 Find the derivative  $f'(x)$  using the power rule.

$$f(x) = 2x^{-\frac{4}{3}}$$

A  $f'(x) = -\frac{8}{3}x^{-\frac{1}{3}}$       B  $f'(x) = -\frac{8}{3}x^{-\frac{7}{3}}$

C  $f'(x) = 2x^{-\frac{7}{3}}$       D  $f'(x) = -\frac{8}{3}x^{-\frac{4}{3}}$

8 Find the derivative  $f'(x)$  using the power rule.

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

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

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