



Basic Derivatives - Negative Integer Power as Division (with Rule) to Derivative

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

$$\text{if } f(x) = x^n, f'(x) = n x^{n-1}$$

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

A $f'(x) = -x^{-1}$

B $f'(x) = x^{-2}$

C $f'(x) = -x^{-2}$

D $f'(x) = -1$

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

$$\text{if } f(x) = x^n, f'(x) = n x^{n-1}$$

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

A $f'(x) = -3x^{-3}$

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

C $f'(x) = x^{-4}$

D $f'(x) = -3x^{-2}$

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

$$\text{if } f(x) = x^n, f'(x) = n x^{n-1}$$

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

A $f'(x) = -5x^{-6}$

B $f'(x) = -5x^{-4}$

C $f'(x) = x^{-6}$

D $f'(x) = -5x^{-5}$

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

$$\text{if } f(x) = x^n, f'(x) = n x^{n-1}$$

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

A $f'(x) = -2x^{-3}$

B $f'(x) = x^{-3}$

C $f'(x) = -2x^{-1}$

D $f'(x) = -2x^{-2}$

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

$$\text{if } f(x) = x^n, f'(x) = n x^{n-1}$$

$$f(x) = \frac{1}{x^4}$$

A $f'(x) = -4x^{-5}$

B $f'(x) = x^{-5}$

C $f'(x) = -4x^{-4}$

D $f'(x) = -4x^{-3}$