



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

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

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

$$f(x) = \frac{7}{x^1}$$

A $f'(x) = -7$

B $f'(x) = -7x^{-2}$

C $f'(x) = -7x^{-1}$

D $f'(x) = 7x^{-2}$

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

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

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

A $f'(x) = 25x^{-4}$

B $f'(x) = 25x^{-6}$

C $f'(x) = 25x^{-5}$

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

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

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

$$f(x) = \frac{8}{x^1}$$

A $f'(x) = -8x^{-1}$

B $f'(x) = -8x^{-2}$

C $f'(x) = 8x^{-2}$

D $f'(x) = -8$

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

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

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

A $f'(x) = 4x^{-2}$

B $f'(x) = -4$

C $f'(x) = -4x^{-1}$

D $f'(x) = -4x^{-2}$

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

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

$$f(x) = -\frac{4}{x^5}$$

A $f'(x) = -4x^{-6}$

B $f'(x) = 20x^{-4}$

C $f'(x) = 20x^{-5}$

D $f'(x) = 20x^{-6}$

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

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

$$f(x) = \frac{7}{x^5}$$

A $f'(x) = 7x^{-6}$

B $f'(x) = -35x^{-5}$

C $f'(x) = -35x^{-4}$

D $f'(x) = -35x^{-6}$

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

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

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

A $f'(x) = 10x^{-3}$

B $f'(x) = 10x^{-2}$

C $f'(x) = 10x^{-1}$

D $f'(x) = -5x^{-3}$

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

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

$$f(x) = -\frac{7}{x^4}$$

A $f'(x) = -7x^{-5}$

B $f'(x) = 28x^{-3}$

C $f'(x) = 28x^{-4}$

D $f'(x) = 28x^{-5}$