



## Basic Derivatives - Negative Integer Power with Coefficient (with Rule) to

### Derivative

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

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

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

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

B  $f'(x) = -7$

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

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

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

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

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

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

B  $f'(x) = 30x^{-4}$

C  $f'(x) = 30x^{-6}$

D  $f'(x) = 30x^{-5}$

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

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

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

A  $f'(x) = -10x^{-4}$

B  $f'(x) = 2x^{-6}$

C  $f'(x) = -10x^{-5}$

D  $f'(x) = -10x^{-6}$

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

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

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

A  $f'(x) = 18x^{-3}$

B  $f'(x) = -9x^{-3}$

C  $f'(x) = 18x^{-2}$

D  $f'(x) = 18x^{-1}$

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

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

$$f(x) = 7x^{-3}$$

A  $f'(x) = -21x^{-2}$

B  $f'(x) = -21x^{-4}$

C  $f'(x) = 7x^{-4}$

D  $f'(x) = -21x^{-3}$

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

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

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

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

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

C  $f'(x) = 20x^{-3}$

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

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

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

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

A  $f'(x) = -12x^{-3}$

B  $f'(x) = -12x^{-2}$

C  $f'(x) = -12x^{-1}$

D  $f'(x) = 6x^{-3}$

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

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

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

A  $f'(x) = 12x^{-5}$

B  $f'(x) = 12x^{-3}$

C  $f'(x) = 12x^{-4}$

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