



Derivative Rules - Sum Rule Negative Powers to Derivative

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

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

A $f'(x) = -8x^{-3} - 4 - 6x$

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

C $f'(x) = -8x^{-2} - 4x - 6x^2$

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

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

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

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

C $f'(x) = 2x^{-3} - 4$

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

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

A $f'(x) = 6x^{-3} + 4$

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

C $f'(x) = 6x^{-2} + 4x$

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

$$f(x) = -2x^{-2} - 3x^2 - 5x$$

A $f'(x) = 4x^{-3} - 6x - 5$

B $f'(x) = 4x^{-2} - 6x^2 - 5x$

C $f'(x) = -2x^{-3} - 3x - 5$

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

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

A $f'(x) = 12x^{-4} - 12x^2$

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

C $f'(x) = 12x^{-4} - 12x^2 + 2$

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

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

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

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

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

C $f'(x) = 6x^{-3} + 2$

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

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

$$f(x) = -5x^{-3} + 3x^2$$

A $f'(x) = -5x^{-4} + 3x$

B $f'(x) = 15x^{-3} + 6x^2$

C $f'(x) = 15x^{-4} + 6x$

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

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

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

B $f'(x) = 10x^{-3} + 2$

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

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