



Derivative Rules - Chain Rule Negative Powers to Derivative

1 Find the derivative $f'(x)$ using the chain rule. $f(x) = (x - 6)^{-3}$

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

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

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

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

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

B $f'(x) = 6(-3x + 5)^{-3}$

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

D $f'(x) = 6(-3x + 5)^{-2}$

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

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

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

B $f'(x) = (-x - 6)^{-1}$

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

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

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

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

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

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

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

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

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

A $f'(x) = 9(-3x + 3)^{-4}$

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

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

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

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

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

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

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

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

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

$$f(x) = (2x^2 - 7)^{-1}$$

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

B $f'(x) = -(2x^2 - 7)^{-1}(4x)$

C $f'(x) = -(2x^2 - 7)^{-2}(4x)$

D $f'(x) = (2x^2 - 7)^{-2}(4x)$

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

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

A $f'(x) = 3(-3x + 3)^{-1}$

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

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

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