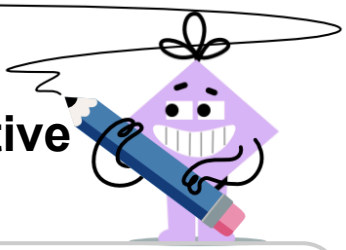
Name



Derivative Rules - Quotient Rule Negative Powers as Division to Derivative

1

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{4}{x^2} - 3}{4x^2 + 3}$

A $f'(x) = \dfrac{(8x^{-3})(4x^2+3) - (-4x^{-2} - 3)(8x)}{(4x^2+3)}$

B $f'(x) = \dfrac{(8x^{-3})(4x^2+3) + (-4x^{-2} - 3)(8x)}{(4x^2+3)^2}$

C $f'(x) = \dfrac{(-4x^{-2} - 3)(8x) - (8x^{-3})(4x^2+3)}{(4x^2+3)^2}$

D $f'(x) = \dfrac{(8x^{-3})(4x^2+3) - (-4x^{-2} - 3)(8x)}{(4x^2+3)^2}$

2

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{\frac{4}{x^3} - 4}{4x - 5}$

A $f'(x) = \dfrac{(4x^{-3} - 4)(4) - (-12x^{-4})(4x-5)}{(4x-5)^2}$

B $f'(x) = \dfrac{(-12x^{-4})(4x-5) - (4x^{-3} - 4)(4)}{(4x-5)^2}$

C $f'(x) = \dfrac{(-12x^{-4})(4x-5) + (4x^{-3} - 4)(4)}{(4x-5)^2}$

D $f'(x) = \dfrac{(-12x^{-4})(4x-5) - (4x^{-3} - 4)(4)}{(4x-5)}$

3

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{5}{x^3} - 3}{-4x^2}$

A $f'(x) = \dfrac{(15x^{-4})(-4x^2) - (-5x^{-3} - 3)(-8x)}{(-4x^2)}$

B $f'(x) = \dfrac{(15x^{-4})(-4x^2) + (-5x^{-3} - 3)(-8x)}{(-4x^2)^2}$

C $f'(x) = \dfrac{(-5x^{-3} - 3)(-8x) - (15x^{-4})(-4x^2)}{(-4x^2)^2}$

D $f'(x) = \dfrac{(15x^{-4})(-4x^2) - (-5x^{-3} - 3)(-8x)}{(-4x^2)^2}$

4

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{4}{x^2} + 4}{-3x - 5}$

A $f'(x) = \dfrac{(8x^{-3})(-3x-5) - (-4x^{-2} + 4)(-3)}{(-3x-5)^2}$

B $f'(x) = \dfrac{(8x^{-3})(-3x-5) - (-4x^{-2} + 4)(-3)}{(-3x-5)}$

C $f'(x) = \dfrac{(-4x^{-2} + 4)(-3) - (8x^{-3})(-3x-5)}{(-3x-5)^2}$

D $f'(x) = \dfrac{(8x^{-3})(-3x-5) + (-4x^{-2} + 4)(-3)}{(-3x-5)^2}$

5

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{5}{x^2} - 4}{-3x^2}$

A $f'(x) = \dfrac{(-5x^{-2} - 4)(-6x) - (10x^{-3})(-3x^2)}{(-3x^2)^2}$

B $f'(x) = \dfrac{(10x^{-3})(-3x^2) - (-5x^{-2} - 4)(-6x)}{(-3x^2)^2}$

C $f'(x) = \dfrac{(10x^{-3})(-3x^2) - (-5x^{-2} - 4)(-6x)}{(-3x^2)}$

D $f'(x) = \dfrac{(10x^{-3})(-3x^2) + (-5x^{-2} - 4)(-6x)}{(-3x^2)^2}$

6

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{3}{x^2} + 2}{-2x}$

A $f'(x) = \dfrac{(-3x^{-2} + 2)(-2) - (6x^{-3})(-2x)}{(-2x)^2}$

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

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

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

7

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{3}{x^3} - 3}{-5x}$

A $f'(x) = \dfrac{(9x^{-4})(-5x) - (-3x^{-3} - 3)(-5)}{(-5x)}$

B $f'(x) = \dfrac{(-3x^{-3} - 3)(-5) - (9x^{-4})(-5x)}{(-5x)^2}$

C $f'(x) = \dfrac{(9x^{-4})(-5x) + (-3x^{-3} - 3)(-5)}{(-5x)^2}$

D $f'(x) = \dfrac{(9x^{-4})(-5x) - (-3x^{-3} - 3)(-5)}{(-5x)^2}$

8

Find the derivative f'(x) using the quotient rule. $f(x) = \dfrac{-\frac{4}{x^3} + 2}{-5x^2}$

A $f'(x) = \dfrac{(12x^{-4})(-5x^2) - (-4x^{-3} + 2)(-10x)}{(-5x^2)}$

B $f'(x) = \dfrac{(-4x^{-3} + 2)(-10x) - (12x^{-4})(-5x^2)}{(-5x^2)^2}$

C $f'(x) = \dfrac{(12x^{-4})(-5x^2) + (-4x^{-3} + 2)(-10x)}{(-5x^2)^2}$

D $f'(x) = \dfrac{(12x^{-4})(-5x^2) - (-4x^{-3} + 2)(-10x)}{(-5x^2)^2}$