



Derivative Rules - Quotient Rule Positive Fractional Powers to Derivative

<p>1 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{2x^{\frac{3}{2}} + 3}{-4x^2 - 7}$	<p>2 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{5x^{\frac{1}{3}} - 6}{3x + 4}$		
<p>A $f'(x) = \frac{(3x^{\frac{1}{2}})(-4x^2 - 7) + (2x^{\frac{3}{2}} + 3)(-8x)}{(-4x^2 - 7)^2}$</p>	<p>B $f'(x) = \frac{(2x^{\frac{3}{2}} + 3)(-8x) - (3x^{\frac{3}{2}})(-4x^2 - 7)}{(-4x^2 - 7)^2}$</p>	<p>A $f'(x) = \frac{(\frac{5}{3}x^{-\frac{2}{3}})(3x + 4) - (5x^{\frac{1}{3}} - 6)(3)}{(3x + 4)^2}$</p>	<p>B $f'(x) = \frac{(5x^{\frac{1}{3}} - 6)(3) - (\frac{5}{3}x^{-\frac{2}{3}})(3x + 4)}{(3x + 4)^2}$</p>
<p>C $f'(x) = \frac{(3x^{\frac{1}{2}})(-4x^2 - 7) - (2x^{\frac{3}{2}} + 3)(-8x)}{(-4x^2 - 7)^2}$</p>	<p>D $f'(x) = \frac{(3x^{\frac{3}{2}})(-4x^2 - 7) - (2x^{\frac{3}{2}} + 3)(-8x)}{(-4x^2 - 7)^2}$</p>	<p>C $f'(x) = \frac{(\frac{5}{3}x^{-\frac{2}{3}})(3x + 4) + (5x^{\frac{1}{3}} - 6)(3)}{(3x + 4)^2}$</p>	<p>D $f'(x) = \frac{(\frac{5}{3}x^{-\frac{2}{3}})(3x + 4) - (5x^{\frac{1}{3}} - 6)(3)}{(3x + 4)^2}$</p>
<p>3 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{-3x^{\frac{2}{3}} + 7}{2x^2 - 6}$	<p>4 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{3x^{\frac{2}{3}} + 3}{-3x}$		
<p>A $f'(x) = \frac{(-2x^{-\frac{1}{3}})(2x^2 - 6) - (-3x^{\frac{2}{3}} + 7)(4x)}{(2x^2 - 6)^2}$</p>	<p>B $f'(x) = \frac{(-2x^{-\frac{1}{3}})(2x^2 - 6) - (-3x^{\frac{2}{3}} + 7)(4x)}{(2x^2 - 6)^2}$</p>	<p>A $f'(x) = \frac{(2x^{-\frac{1}{3}})(-3x) - (3x^{\frac{2}{3}} + 3)(-3)}{(-3x)^2}$</p>	<p>B $f'(x) = \frac{(2x^{-\frac{1}{3}})(-3x) + (3x^{\frac{2}{3}} + 3)(-3)}{(-3x)^2}$</p>
<p>C $f'(x) = \frac{(-3x^{\frac{2}{3}} + 7)(4x) - (-2x^{-\frac{1}{3}})(2x^2 - 6)}{(2x^2 - 6)^2}$</p>	<p>D $f'(x) = \frac{(-2x^{-\frac{1}{3}})(2x^2 - 6) + (-3x^{\frac{2}{3}} + 7)(4x)}{(2x^2 - 6)^2}$</p>	<p>C $f'(x) = \frac{(2x^{-\frac{1}{3}})(-3x) - (3x^{\frac{2}{3}} + 3)(-3)}{(-3x)^2}$</p>	<p>D $f'(x) = \frac{(3x^{\frac{2}{3}} + 3)(-3) - (2x^{-\frac{1}{3}})(-3x)}{(-3x)^2}$</p>
<p>5 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{-2x^{\frac{2}{3}} - 4}{-2x + 5}$	<p>6 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{5x^{\frac{2}{3}} + 6}{5x^2 + 3}$		
<p>A $f'(x) = \frac{(-\frac{4}{3}x^{-\frac{1}{3}})(-2x + 5) + (-2x^{\frac{2}{3}} - 4)(-2)}{(-2x + 5)^2}$</p>	<p>B $f'(x) = \frac{(-\frac{4}{3}x^{-\frac{1}{3}})(-2x + 5) - (-2x^{\frac{2}{3}} - 4)(-2)}{(-2x + 5)^2}$</p>	<p>A $f'(x) = \frac{(5x^{\frac{2}{3}} + 6)(10x) - (\frac{10}{3}x^{-\frac{1}{3}})(5x^2 + 3)}{(5x^2 + 3)^2}$</p>	<p>B $f'(x) = \frac{(\frac{10}{3}x^{-\frac{1}{3}})(5x^2 + 3) + (5x^{\frac{2}{3}} + 6)(10x)}{(5x^2 + 3)^2}$</p>
<p>C $f'(x) = \frac{(-2x^{\frac{2}{3}} - 4)(-2) - (-\frac{4}{3}x^{-\frac{1}{3}})(-2x + 5)}{(-2x + 5)^2}$</p>	<p>D $f'(x) = \frac{(-\frac{4}{3}x^{-\frac{1}{3}})(-2x + 5) - (-2x^{\frac{2}{3}} - 4)(-2)}{(-2x + 5)^2}$</p>	<p>C $f'(x) = \frac{(\frac{10}{3}x^{-\frac{1}{3}})(5x^2 + 3) - (5x^{\frac{2}{3}} + 6)(10x)}{(5x^2 + 3)^2}$</p>	<p>D $f'(x) = \frac{(\frac{10}{3}x^{-\frac{1}{3}})(5x^2 + 3) - (5x^{\frac{2}{3}} + 6)(10x)}{(5x^2 + 3)^2}$</p>
<p>7 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{4x^{\frac{3}{2}} + 5}{-3x^2}$	<p>8 Find the derivative $f'(x)$ using the quotient rule.</p> $f(x) = \frac{4x^{\frac{2}{3}} - 4}{-5x^2 - 5}$		
<p>A $f'(x) = \frac{(4x^{\frac{3}{2}} + 5)(-6x) - (6x^{\frac{1}{2}})(-3x^2)}{(-3x^2)^2}$</p>	<p>B $f'(x) = \frac{(6x^{\frac{1}{2}})(-3x^2) + (4x^{\frac{3}{2}} + 5)(-6x)}{(-3x^2)^2}$</p>	<p>A $f'(x) = \frac{(4x^{\frac{2}{3}} - 4)(-10x) - (\frac{8}{3}x^{-\frac{1}{3}})(-5x^2 - 5)}{(-5x^2 - 5)^2}$</p>	<p>B $f'(x) = \frac{(\frac{8}{3}x^{-\frac{1}{3}})(-5x^2 - 5) + (4x^{\frac{2}{3}} - 4)(-10x)}{(-5x^2 - 5)^2}$</p>
<p>C $f'(x) = \frac{(6x^{\frac{1}{2}})(-3x^2) - (4x^{\frac{3}{2}} + 5)(-6x)}{(-3x^2)^2}$</p>	<p>D $f'(x) = \frac{(6x^{\frac{1}{2}})(-3x^2) - (4x^{\frac{3}{2}} + 5)(-6x)}{(-3x^2)^2}$</p>	<p>C $f'(x) = \frac{(\frac{8}{3}x^{-\frac{1}{3}})(-5x^2 - 5) - (4x^{\frac{2}{3}} - 4)(-10x)}{(-5x^2 - 5)^2}$</p>	<p>D $f'(x) = \frac{(\frac{8}{3}x^{-\frac{1}{3}})(-5x^2 - 5) - (4x^{\frac{2}{3}} - 4)(-10x)}{(-5x^2 - 5)^2}$</p>