



# Derivative Rules - Quotient Rule Negative Fractional Powers to Derivative

<p><b>1</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{-3x^{-\frac{2}{3}} - 5}{3x}$	<p><b>2</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{-4x^{-\frac{1}{3}} - 2}{5x^2}$		
<p><b>A</b></p> $f'(x) = \frac{(2x^{-\frac{5}{3}})(3x) + (-3x^{-\frac{2}{3}} - 5)(3)}{(3x)^2}$	<p><b>B</b></p> $f'(x) = \frac{(2x^{-\frac{5}{3}})(3x) - (-3x^{-\frac{2}{3}} - 5)(3)}{(3x)^2}$	<p><b>A</b></p> $f'(x) = \frac{(\frac{4}{3}x^{-\frac{4}{3}})(5x^2) + (-4x^{-\frac{1}{3}} - 2)(10x)}{(5x^2)^2}$	<p><b>B</b></p> $f'(x) = \frac{(\frac{4}{3}x^{-\frac{4}{3}})(5x^2) - (-4x^{-\frac{1}{3}} - 2)(10x)}{(5x^2)^2}$
<p><b>C</b></p> $f'(x) = \frac{(2x^{-\frac{5}{3}})(3x) - (-3x^{-\frac{2}{3}} - 5)(3)}{(3x)^2}$	<p><b>D</b></p> $f'(x) = \frac{(-3x^{-\frac{2}{3}} - 5)(3) - (2x^{-\frac{5}{3}})(3x)}{(3x)^2}$	<p><b>C</b></p> $f'(x) = \frac{(-4x^{-\frac{1}{3}} - 2)(10x) - (\frac{4}{3}x^{-\frac{4}{3}})(5x^2)}{(5x^2)^2}$	<p><b>D</b></p> $f'(x) = \frac{(\frac{4}{3}x^{-\frac{4}{3}})(5x^2) - (-4x^{-\frac{1}{3}} - 2)(10x)}{(5x^2)^2}$
<p><b>3</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{2x^{-\frac{1}{2}} - 6}{2x - 7}$	<p><b>4</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{-4x^{-\frac{1}{2}} - 6}{-2x}$		
<p><b>A</b></p> $f'(x) = \frac{(-x^{-\frac{3}{2}})(2x - 7) + (2x^{-\frac{1}{2}} - 6)(2)}{(2x - 7)^2}$	<p><b>B</b></p> $f'(x) = \frac{(2x^{-\frac{1}{2}} - 6)(2) - (-x^{-\frac{3}{2}})(2x - 7)}{(2x - 7)^2}$	<p><b>A</b></p> $f'(x) = \frac{(-4x^{-\frac{1}{2}} - 6)(-2) - (2x^{-\frac{3}{2}})(-2x)}{(-2x)^2}$	<p><b>B</b></p> $f'(x) = \frac{(2x^{-\frac{3}{2}})(-2x) - (-4x^{-\frac{1}{2}} - 6)(-2)}{(-2x)^2}$
<p><b>C</b></p> $f'(x) = \frac{(-x^{-\frac{3}{2}})(2x - 7) - (2x^{-\frac{1}{2}} - 6)(2)}{(2x - 7)^2}$	<p><b>D</b></p> $f'(x) = \frac{(-x^{-\frac{3}{2}})(2x - 7) - (2x^{-\frac{1}{2}} - 6)(2)}{(2x - 7)^2}$	<p><b>C</b></p> $f'(x) = \frac{(2x^{-\frac{3}{2}})(-2x) - (-4x^{-\frac{1}{2}} - 6)(-2)}{(-2x)^2}$	<p><b>D</b></p> $f'(x) = \frac{(2x^{-\frac{3}{2}})(-2x) + (-4x^{-\frac{1}{2}} - 6)(-2)}{(-2x)^2}$
<p><b>5</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{-5x^{-\frac{2}{3}} + 7}{-5x^2 - 2}$	<p><b>6</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{-3x^{-\frac{3}{2}} + 3}{-2x^2}$		
<p><b>A</b></p> $f'(x) = \frac{(\frac{10}{3}x^{-\frac{5}{3}})(-5x^2 - 2) - (-5x^{-\frac{2}{3}} + 7)(-10x)}{(-5x^2 - 2)^2}$	<p><b>B</b></p> $f'(x) = \frac{(-5x^{-\frac{2}{3}} + 7)(-10x) - (\frac{10}{3}x^{-\frac{5}{3}})(-5x^2 - 2)}{(-5x^2 - 2)^2}$	<p><b>A</b></p> $f'(x) = \frac{(\frac{9}{2}x^{-\frac{5}{2}})(-2x^2) + (-3x^{-\frac{3}{2}} + 3)(-4x)}{(-2x^2)^2}$	<p><b>B</b></p> $f'(x) = \frac{(-3x^{-\frac{3}{2}} + 3)(-4x) - (\frac{9}{2}x^{-\frac{5}{2}})(-2x^2)}{(-2x^2)^2}$
<p><b>C</b></p> $f'(x) = \frac{(\frac{10}{3}x^{-\frac{5}{3}})(-5x^2 - 2) + (-5x^{-\frac{2}{3}} + 7)(-10x)}{(-5x^2 - 2)^2}$	<p><b>D</b></p> $f'(x) = \frac{(\frac{10}{3}x^{-\frac{5}{3}})(-5x^2 - 2) - (-5x^{-\frac{2}{3}} + 7)(-10x)}{(-5x^2 - 2)^2}$	<p><b>C</b></p> $f'(x) = \frac{(\frac{9}{2}x^{-\frac{5}{2}})(-2x^2) - (-3x^{-\frac{3}{2}} + 3)(-4x)}{(-2x^2)^2}$	<p><b>D</b></p> $f'(x) = \frac{(\frac{9}{2}x^{-\frac{5}{2}})(-2x^2) - (-3x^{-\frac{3}{2}} + 3)(-4x)}{(-2x^2)^2}$
<p><b>7</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{2x^{-\frac{3}{2}} - 3}{-4x}$	<p><b>8</b></p> <p>Find the derivative <math>f'(x)</math> using the quotient rule.</p> $f(x) = \frac{5x^{-\frac{2}{3}} + 6}{-4x^2}$		
<p><b>A</b></p> $f'(x) = \frac{(-3x^{-\frac{5}{2}})(-4x) + (2x^{-\frac{3}{2}} - 3)(-4)}{(-4x)^2}$	<p><b>B</b></p> $f'(x) = \frac{(-3x^{-\frac{5}{2}})(-4x) - (2x^{-\frac{3}{2}} - 3)(-4)}{(-4x)^2}$	<p><b>A</b></p> $f'(x) = \frac{(5x^{-\frac{2}{3}} + 6)(-8x) - (-\frac{10}{3}x^{-\frac{5}{3}})(-4x^2)}{(-4x^2)^2}$	<p><b>B</b></p> $f'(x) = \frac{(-\frac{10}{3}x^{-\frac{5}{3}})(-4x^2) + (5x^{-\frac{2}{3}} + 6)(-8x)}{(-4x^2)^2}$
<p><b>C</b></p> $f'(x) = \frac{(2x^{-\frac{3}{2}} - 3)(-4) - (-3x^{-\frac{5}{2}})(-4x)}{(-4x)^2}$	<p><b>D</b></p> $f'(x) = \frac{(-3x^{-\frac{5}{2}})(-4x) - (2x^{-\frac{3}{2}} - 3)(-4)}{(-4x)^2}$	<p><b>C</b></p> $f'(x) = \frac{(-\frac{10}{3}x^{-\frac{5}{3}})(-4x^2) - (5x^{-\frac{2}{3}} + 6)(-8x)}{(-4x^2)^2}$	<p><b>D</b></p> $f'(x) = \frac{(-\frac{10}{3}x^{-\frac{5}{3}})(-4x^2) - (5x^{-\frac{2}{3}} + 6)(-8x)}{(-4x^2)^2}$