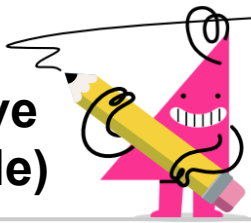
Name



Derivative Rules - Product Rule Positive Fractional Powers as Radical (with Rule) to Derivative

1 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (2\sqrt[3]{x^2} + 6)(4x^2 + 2)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2) + (2x^{\frac{2}{3}}+6)(8x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(8x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2) - (2x^{\frac{2}{3}}+6)(8x)$

2 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (2\sqrt[3]{x^2} + 2)(4x^2 + 2)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2) - (2x^{\frac{2}{3}}+2)(8x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2) + (2x^{\frac{2}{3}}+2)(8x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(4x^2+2)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(8x)$

3 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (-4\sqrt{x} + 4)(4x)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (-2x^{-\frac{1}{2}})(4x) + (-4x^{\frac{1}{2}}+4)(4)$	$f'(x) = (-2x^{-\frac{1}{2}})(4)$	$f'(x) = (-2x^{-\frac{1}{2}})(4x) - (-4x^{\frac{1}{2}}+4)(4)$	$f'(x) = (-2x^{-\frac{1}{2}})(4x)$

4 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (-2\sqrt{x^3} - 4)(4x^2)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (-3x^{\frac{1}{2}})(4x^2) + (-2x^{\frac{3}{2}}-4)(8x)$	$f'(x) = (-3x^{\frac{3}{2}})(8x)$	$f'(x) = (-3x^{\frac{3}{2}})(4x^2)$	$f'(x) = (-3x^{\frac{1}{2}})(4x^2) - (-2x^{\frac{3}{2}}-4)(8x)$

5 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (2\sqrt[3]{x^2} - 5)(3x^2 - 3)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(3x^2-3) + (2x^{\frac{2}{3}}-5)(6x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(3x^2-3)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(6x)$	$f'(x) = (\frac{4}{3}x^{-\frac{1}{3}})(3x^2-3) - (2x^{\frac{2}{3}}-5)(6x)$

6 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (4\sqrt[3]{x^4} - 4)(5x)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (\frac{16}{3}x^{\frac{1}{3}})(5x) + (4x^{\frac{4}{3}}-4)(5)$	$f'(x) = (\frac{16}{3}x^{\frac{1}{3}})(5)$	$f'(x) = (\frac{16}{3}x^{\frac{1}{3}})(5x) - (4x^{\frac{4}{3}}-4)(5)$	$f'(x) = (\frac{16}{3}x^{\frac{1}{3}})(5x)$

7 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (-4\sqrt[3]{x^2} - 2)(3x)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (-\frac{8}{3}x^{-\frac{1}{3}})(3x)$	$f'(x) = (-\frac{8}{3}x^{-\frac{1}{3}})(3x) + (-4x^{\frac{2}{3}}-2)(3)$	$f'(x) = (-\frac{8}{3}x^{-\frac{1}{3}})(3)$	$f'(x) = (-\frac{8}{3}x^{-\frac{1}{3}})(3x) - (-4x^{\frac{2}{3}}-2)(3)$

8 if $h(x) = f(x)\,g(x),\ h'(x) = f'(x)\,g(x) + f(x)\,g'(x)$
$f(x) = (-5\sqrt{x} - 7)(2x^2)$

Find the derivative f'(x) using the product rule.

A	B	C	D
$f'(x) = (-\frac{5}{2}x^{-\frac{1}{2}})(2x^2)$	$f'(x) = (-\frac{5}{2}x^{-\frac{1}{2}})(4x)$	$f'(x) = (-\frac{5}{2}x^{-\frac{1}{2}})(2x^2) + (-5x^{\frac{1}{2}}-7)(4x)$	$f'(x) = (-\frac{5}{2}x^{-\frac{1}{2}})(2x^2) - (-5x^{\frac{1}{2}}-7)(4x)$