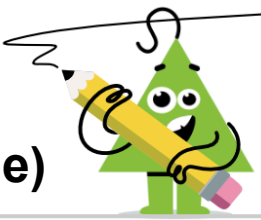
Name



Derivative Rules - Sum Rule Negative Fractional Powers as Radical (with Rule) to Derivative

1 Find the derivative f'(x) using the sum rule.

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

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

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

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

A	$f'(x) = -\frac{9}{2}x^{-\frac{5}{2}} - 6x^2 + 8x$	B	$f'(x) = -\frac{9}{2}x^{-\frac{3}{2}} - 6x^3 + 8x^2$
C	$f'(x) = 3x^{-\frac{5}{2}} - 2x^2 + 4x$		

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$
$f(x) = -\frac{3}{\sqrt[3]{x^2}} + 4x - 5$

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

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

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

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

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

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

A	$f'(x) = -4x^{-\frac{5}{3}} + 3x$	B	$f'(x) = \frac{8}{3}x^{-\frac{2}{3}} + 6x^2$
C	$f'(x) = \frac{8}{3}x^{-\frac{5}{3}} + 6x$		

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

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

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

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

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

A	$f'(x) = 4x^{-\frac{7}{3}} + 2x^2$	B	$f'(x) = -\frac{16}{3}x^{-\frac{7}{3}} + 6x^2$
C	$f'(x) = -\frac{16}{3}x^{-\frac{4}{3}} + 6x^3$		

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

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

A	$f'(x) = -4x^{-\frac{7}{3}} + 6x$	B	$f'(x) = -4x^{-\frac{4}{3}} + 6x^2$
C	$f'(x) = -4x^{-\frac{7}{3}} + 6x - 4$	D	$f'(x) = 3x^{-\frac{7}{3}} + 3x$