Name

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = -5x^{-\frac{1}{2}} - 3x^2$

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = -2x^{-\frac{3}{2}} - 3x$

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = 4x^{-\frac{3}{2}} - 5x + 5x^2$

A	$f'(x) = 4x^{-\frac{5}{2}} - 5 + 5x$	B	$f'(x) = -6x^{-\frac{3}{2}} - 5x + 10x^2$
C	$f'(x) = -6x^{-\frac{5}{2}} - 5 + 10x$		

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = -3x^{-\frac{3}{2}} + 2 - 4x^2$

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = 2x^{-\frac{1}{3}} + 4x^3$

A	$f'(x) = -\frac{2}{3}x^{-\frac{4}{3}} + 12x^2$	B	$f'(x) = 2x^{-\frac{4}{3}} + 4x^2$
C	$f'(x) = -\frac{2}{3}x^{-\frac{1}{3}} + 12x^3$		

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = 2x^{-\frac{1}{3}} + 2x^3$

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = 3x^{-\frac{4}{3}} + 3$

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

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

if $h(x) = f(x) + g(x),\ h'(x) = f'(x) + g'(x)$

$f(x) = -4x^{-\frac{4}{3}} + 2 - 3x$

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