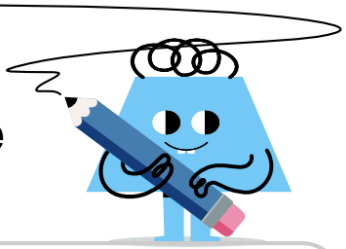
Name



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

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

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

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (2x+6)^{-\frac{2}{3}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (3x-5)^{-\frac{1}{3}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (x+6)^{-\frac{1}{3}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (-x^2+3)^{-\frac{2}{3}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (2x+2)^{-\frac{3}{2}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (-x+2)^{-\frac{1}{3}}$$

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

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

$$\text{if } y = f(g(x)),\ y' = f'(g(x)) \cdot g'(x)$$
$$f(x) = (-3x-6)^{-\frac{3}{2}}$$

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