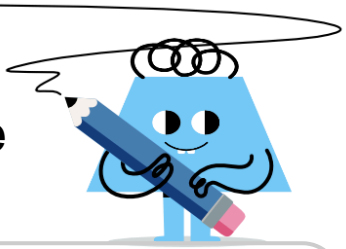
Name

Derivative Rules - Trigonometric Angle with Power as Fraction to Derivative



1 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = \cos\left(\frac{1}{x^3}\right)$

A $f'(x) = -\sin\left(\frac{1}{x^3}\right) \cdot \left(-\frac{3}{x^4}\right)$

B $f'(x) = -\sin\left(\frac{1}{x^3}\right) \cdot \left(\frac{1}{x^3}\right)$

C $f'(x) = \cos\left(\frac{1}{x^3}\right) \cdot \left(-\frac{3}{x^4}\right)$

D $f'(x) = -\sin\left(\frac{1}{x^3}\right)$

2 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = 2\sin\left(\frac{3}{x^3}\right)$

A $f'(x) = 2\cos\left(\frac{3}{x^3}\right)$

B $f'(x) = 2\cos\left(\frac{3}{x^3}\right) \cdot \left(\frac{3}{x^3}\right)$

C $f'(x) = 2\cos\left(\frac{3}{x^3}\right) \cdot \left(-\frac{9}{x^4}\right)$

D $f'(x) = 2\sin\left(\frac{3}{x^3}\right) \cdot \left(-\frac{9}{x^4}\right)$

3 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = 5\cos\left(\frac{2}{x^2}\right)$

A $f'(x) = -5\sin\left(\frac{2}{x^2}\right) \cdot \left(\frac{2}{x^2}\right)$

B $f'(x) = -5\sin\left(\frac{2}{x^2}\right)$

C $f'(x) = -5\sin\left(\frac{2}{x^2}\right) \cdot \left(-\frac{4}{x^3}\right)$

D $f'(x) = 5\cos\left(\frac{2}{x^2}\right) \cdot \left(-\frac{4}{x^3}\right)$

4 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = \sin\left(\frac{3}{x^3}\right)$

A $f'(x) = \cos\left(\frac{3}{x^3}\right)$

B $f'(x) = \cos\left(\frac{3}{x^3}\right) \cdot \left(\frac{3}{x^3}\right)$

C $f'(x) = \sin\left(\frac{3}{x^3}\right) \cdot \left(-\frac{9}{x^4}\right)$

D $f'(x) = \cos\left(\frac{3}{x^3}\right) \cdot \left(-\frac{9}{x^4}\right)$

5 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = 5\sin\left(\frac{2}{x^3}\right)$

A $f'(x) = 5\sin\left(\frac{2}{x^3}\right) \cdot \left(-\frac{6}{x^4}\right)$

B $f'(x) = 5\cos\left(\frac{2}{x^3}\right) \cdot \left(\frac{2}{x^3}\right)$

C $f'(x) = 5\cos\left(\frac{2}{x^3}\right)$

D $f'(x) = 5\cos\left(\frac{2}{x^3}\right) \cdot \left(-\frac{6}{x^4}\right)$

6 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = 4\sin\left(\frac{2}{x^2}\right)$

A $f'(x) = 4\cos\left(\frac{2}{x^2}\right) \cdot \left(\frac{2}{x^2}\right)$

B $f'(x) = 4\sin\left(\frac{2}{x^2}\right) \cdot \left(-\frac{4}{x^3}\right)$

C $f'(x) = 4\cos\left(\frac{2}{x^2}\right)$

D $f'(x) = 4\cos\left(\frac{2}{x^2}\right) \cdot \left(-\frac{4}{x^3}\right)$

7 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = 2\sin\left(\frac{2}{x^3}\right)$

A $f'(x) = 2\sin\left(\frac{2}{x^3}\right) \cdot \left(-\frac{6}{x^4}\right)$

B $f'(x) = 2\cos\left(\frac{2}{x^3}\right)$

C $f'(x) = 2\cos\left(\frac{2}{x^3}\right) \cdot \left(-\frac{6}{x^4}\right)$

D $f'(x) = 2\cos\left(\frac{2}{x^3}\right) \cdot \left(\frac{2}{x^3}\right)$

8 Find the derivative f'(x) using the trigonometric rules and the chain rule. $f(x) = \cos\left(\frac{3}{x^2}\right)$

A $f'(x) = -\sin\left(\frac{3}{x^2}\right) \cdot \left(-\frac{6}{x^3}\right)$

B $f'(x) = -\sin\left(\frac{3}{x^2}\right)$

C $f'(x) = \cos\left(\frac{3}{x^2}\right) \cdot \left(-\frac{6}{x^3}\right)$

D $f'(x) = -\sin\left(\frac{3}{x^2}\right) \cdot \left(\frac{3}{x^2}\right)$