



# Derivative Rules - Trigonometric Angle Binomial to Derivative

1 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 2 \cos(2x^4 - 2x)$$

$$A \ f(x) = -2 \sin(2x^4 - 2x) \cdot (2x^4 - 2x) \quad B \ f(x) = 2 \cos(2x^4 - 2x) \cdot (8x^3 - 2)$$

$$C \ f(x) = -2 \sin(2x^4 - 2x) \cdot (8x^3 - 2) \quad D \ f'(x) = -2 \sin(2x^4 - 2x)$$

2 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 3 \sin(3x^3 - 2x^2)$$

$$A \ f(x) = 3 \sin(3x^3 - 2x^2) \cdot (9x^2 - 4x) \quad B \ f(x) = 3 \cos(3x^3 - 2x^2) \cdot (9x^2 - 4x)$$

$$C \ f'(x) = 3 \cos(3x^3 - 2x^2) \quad D \ f(x) = 3 \cos(3x^3 - 2x^2) \cdot (3x^3 - 2x^2)$$

3 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 3 \sin(x^2 - x)$$

$$A \ f'(x) = 3 \cos(x^2 - x) \quad B \ f(x) = 3 \cos(x^2 - x) \cdot (2x - 1)$$

$$C \ f(x) = 3 \sin(x^2 - x) \cdot (2x - 1) \quad D \ f(x) = 3 \cos(x^2 - x) \cdot (x^2 - x)$$

4 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 2 \sin(x^4 - 2x^3)$$

$$A \ f(x) = 2 \cos(x^4 - 2x^3) \cdot (x^4 - 2x^3) \quad B \ f(x) = 2 \cos(x^4 - 2x^3) \cdot (4x^3 - 6x^2)$$

$$C \ f(x) = 2 \sin(x^4 - 2x^3) \cdot (4x^3 - 6x^2) \quad D \ f'(x) = 2 \cos(x^4 - 2x^3)$$

5 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 2 \sin(2x^2 - x)$$

$$A \ f(x) = 2 \sin(2x^2 - x) \cdot (4x - 1) \quad B \ f(x) = 2 \cos(2x^2 - x) \cdot (2x^2 - x)$$

$$C \ f'(x) = 2 \cos(2x^2 - x) \quad D \ f(x) = 2 \cos(2x^2 - x) \cdot (4x - 1)$$

6 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 5 \cos(x^2 - x)$$

$$A \ f(x) = -5 \sin(x^2 - x) \cdot (x^2 - x) \quad B \ f'(x) = -5 \sin(x^2 - x)$$

$$C \ f(x) = -5 \sin(x^2 - x) \cdot (2x - 1) \quad D \ f(x) = 5 \cos(x^2 - x) \cdot (2x - 1)$$

7 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 3 \sin(3x^2 - 2x)$$

$$A \ f(x) = 3 \cos(3x^2 - 2x) \cdot (6x - 2) \quad B \ f(x) = 3 \sin(3x^2 - 2x) \cdot (6x - 2)$$

$$C \ f(x) = 3 \cos(3x^2 - 2x) \cdot (3x^2 - 2x) \quad D \ f'(x) = 3 \cos(3x^2 - 2x)$$

8 Find the derivative  $f'(x)$  using the trigonometric rules and the chain rule.

$$f(x) = 2 \sin(3x^2 - 2x)$$

$$A \ f(x) = 2 \cos(3x^2 - 2x) \cdot (3x^2 - 2x) \quad B \ f'(x) = 2 \cos(3x^2 - 2x)$$

$$C \ f(x) = 2 \cos(3x^2 - 2x) \cdot (6x - 2) \quad D \ f(x) = 2 \sin(3x^2 - 2x) \cdot (6x - 2)$$