

Function derivative example

Calculate the derivative of the following function:

$$f(x) = \frac{x}{\cos x}$$

$$f(x) = x \cdot (\cos x)^{-1}$$

$$f'(x) = (\cos x)^{-1} + x \cdot (-1) \cdot (\cos x)^{-2} \cdot (-1) \cdot \sin x$$

$$f'(x) = \frac{1}{\cos x} + \frac{x \cdot \sin x}{\cos^2 x}$$

$$f'(x) = \frac{\cos x + x \cdot \sin x}{\cos^2 x}$$