

Function derivative example

Calculate the derivative of the following function:

$$f(x) = \frac{\sin x}{x + 1}$$

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

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

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

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