

Trigonometric Derivatives

1. Find $f'(x)$ for the following functions:

(a) $f(x) = 4 \cos(x) - 2/3 \sin(x)$

(b) $f(x) = \sec(x) \tan(x)$

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

2. Find the slope of the tangent line to $f(x) = 5 \sin x - \sec x$ at $x = \pi/4$.