

Derivatives of Trigonometric Functions (3.6)**Derivatives of Trigonometric Functions**

1. $f(x) = \tan x$

2. $f(x) = \cot x$

3. $f(x) = \csc x$

4. $f(x) = \sec x$

Derivatives of Trigonometric Functions: Differentiate the function using two methods.

5. $f(x) = 3x^2 \csc x$ Product Rule

5. $f(x) = 3x^2 \csc x$ Quotient Rule

Derivatives of Trigonometric Functions: Differentiate.

6. $f(x) = -2 \ln x \tan x$

7. $f(x) = \tan x \sin x$

Derivatives of Trigonometric Functions: Differentiate.

8. $f(x) = \frac{3x^2}{2 - \cos x}$

9. $f(x) = \frac{2 - \sec x}{1 + e^x}$

Finding a Tangent Line: Find an equation of the tangent line to the curve at the given point.

10. $f(x) = -3 \csc x$ at $x = \frac{5\pi}{6}$