

Trigonometric Derivative Practice

Compute the following derivatives.

1. Find the derivative of

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

2. Find the derivative of

$$g(x) = (\cos(x))^2.$$

3. Find the derivative of

$$\ell(x) = \cos(x)x^2e^x.$$

4. Find the derivative of

$$k(x) = \frac{x^3}{\sin(x)e^x}.$$