§3.3: Derivatives of Trig Functions

1.] Differentiate the following functions:

    a.) $f(x) = e^x \cos(x)$

    b.) $g(x) = \dfrac{\sin(x)}{x^2 + e^x}$

    c.) $h(x) = \sin(x) - x\cos(x)$

    d.) $k(x) = \dfrac{1 + \sin(x)}{1 - \sin(x)}$

2.] Differentiate the following functions:

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

    b.) $g(x) = \csc(x)$

3.] Differentiate the following functions:

a.) $f(x) = \cot^2(x)$ b.) $g(x) = 2^x \sec(x)$

4.] Find the equation of the tangent line to the graph of $f(x) = \tan(x) - \sec(x)$ at the point $(0, f(0))$.