

Practice Quiz No. 4

Show all of your work, label your answers clearly, and do not use a calculator.

Problem 1 Find the derivative of

$$f(x) = \csc(e^x)$$

Problem 2 Find the derivative of

$$f(x) = e^{2x^2+5x}$$

Problem 3 Find the derivative of

$$g(y) = \sec(\tan(y))$$

Problem 4 Find the derivative of

$$f(x) = e^{e^x}$$

Problem 5 Given the equation $e^{2x} = \sin(x + 3y)$, find $y'(x)$.

Problem 6 Given the equation $\theta^{1/2} + r^{1/2} = 1$, find $r'(\theta)$.

Problem 7 Given the equation $\cos(r) + \cot(\theta) = e^{r\theta}$, find $r'(\theta)$.