SECTION 3.2 **Math 1000 Worksheet** FALL 2024

For practice only. Not to be submitted.

1. Differentiate each of the following.

   (a) $y = \sqrt{4e^x + 2}$

   (b) $y = \sin(x^2 - 7x)$

   (c) $f(x) = e^{5^x}$

   (d) $y = \cos(\cos(x))$

   (e) $f(x) = (5 - 2x)^{-4} e^{\sec(x)}$

   (f) $f(t) = \tan(t^2 e^t)$

   (g) $y = \dfrac{x^2}{(x^3 - x)^6}$

   (h) $h(x) = \sin(\cos(\tan(x)))$