Class 20: The Return of the Chain Rule:
Calculus II
College of the Atlantic. Feb 23, 2023

Figure 1: Created via https://www.memecreator.org/template/oh-hai7/.

Find the derivatives of the following functions using the chain rule:

$$f(x) = \sin(x^3 + 7) \tag{1}$$

$$f(x) = \sqrt{\sin(x)} \tag{2}$$

$$f(x) = \sin(\sqrt{x}) \tag{3}$$

$$f(x) = \sqrt{\sin(\sqrt{x})} \tag{4}$$

$$f(x) = \frac{1}{x^2 - x} \tag{5}$$

$$f(x) = \ln(7x^2 + 14x) \tag{6}$$

$$f(x) = e^{-x} \tag{7}$$

$$f(x) = e^{-\lambda x} \tag{8}$$

$$f(x) = e^{-4x^2} \tag{9}$$