

* office hours

* teachingcenter.vfl.edu

M-F 9:35-2:45

$$f(x) = \underline{\cos}(\underline{\sec(x)})$$

$$\frac{d}{dx} \cos(\sec(x)) \cdot \frac{d}{dx} \sec(x)$$

$$f'(x) = -\sin(\sec(x)) \cdot \sec(x)\tan(x)$$

$$f(x) = \cos(\sec(2x))$$

$$\frac{d}{dx} \cos(\sec(2x)) \cdot \frac{d}{dx} \sec(2x) \cdot \frac{d}{dx} 2x$$

$$f'(x) = -\sin(\sec(2x)) \cdot \sec(2x) \tan(2x) \cdot 2$$

$$f(x) = [\cos(\sec(2x))]^{2-1}$$

$$f'(x) = 2 [\cos(\sec(2x))] \cdot \frac{d}{dx} \cos(\sec(2x))$$

$$\rightarrow -\sin(\sec(2x)) \cdot \sec(2x) \tan(2x) \cdot 2$$

$$f'(x) = [2 \cos(\sec(2x))] \cdot [-\sin(\sec(2x)) \cdot \sec(2x) \tan(2x) \cdot 2]$$

$$f(x) = \frac{\cos(\sec(x))}{x^2}$$

$$f'(x) = \frac{(x^2) \frac{d}{dx} \cos(\sec(x)) - \cos(\sec(x)) \frac{d}{dx} x^2}{(x^2)^2}$$

$$f'(x) = x^2 \left[-\sin(\sec(x)) \cdot \sec(x) \tan(x) \right] - \cos(\sec(x)) \cdot 2x$$

$$(x^2)^2$$

$$f(x) = x^3 e^{x^2+1}$$

$$f'(x) = \frac{d}{dx}(x^3) e^{x^2+1} + x^3 \frac{d}{dx}(e^{x^2+1})$$

$$= 3x^2 e^{x^2+1} + x^3 \left[e^{x^2+1} \cdot \frac{d}{dx}(x^2+1) \right]$$

$$= 3x^2 e^{x^2+1} + x^3 e^{x^2+1} (2x)$$