

Workshop Problems–October 5

- (a) Show that if f , g , and h are differentiable, then

$$[f(g(h(x)))]' = f'(g(h(x))) \cdot g'(h(x)) \cdot h'(x).$$

- (b) Calculate the derivative of

$$F(x) = \ln(\cos(3x)).$$

- (c) Calculate the derivative of

$$G(x) = \sqrt{e \cdot \sin(e^x) \cdot \cos(x + x^2)}.$$