Homework 05

1. Section 3.5: problems 17, 33(a), 34(a), 49 (Hint: what is the definition of $\dfrac{d\sin\theta}{d\theta}\Big|_{\theta=c}$?) , 57, 58.

2. Section 3.5: Evaluate $\lim\limits_{x\to 0}\ \dfrac{d}{dx}\left(\dfrac{\sin x}{x}\right)$.

3. Section 3.6: Do as many problems as you can from problems 51, 53, $\cdots$, 77.

4. Assume $g(2) = 3$, $g'(2) = 0.1$, $f'(2) = 3$, $f'(3) = 4$ and $f'(4) = 5$. What is $\frac{d}{dx}f(g(x))$ at $x = 2$?

5. Section 3.7: problems 27, 31, 48, 51(a).