Math 114 Fall 2017
Calculus I HW 8
Due Wednesday, November 8

In this homework you do not need to compute derivatives from the definition, but may use any techniques of differentiation we have discussed in class. However, remember that you will need to compute derivatives directly from the definition on the test.

1. Stewart 2.5.36
2. Stewart 2.5.42
3. Find
$$\frac{d}{dx}\sqrt[5]{\frac{x^2\sin(3x)}{\tan(x)}}$$
4. Find
$$\frac{d}{dx}\tan^4(\sqrt[3]{x^5+x^3+2}+1).$$
5. Stewart 2.8.5 (no graphing)
6. Stewart 2.8.12
7. ($\star$) Stewart 2.8.16
8. Stewart 2.6.10
9. Stewart 2.6.20
10. Stewart 2.6.22
11. Stewart 2.6.26
12. Suppose $f(x) = ax^2 + bx + c$ satisfies $f(2) = 1, f'(2) = 2, f''(2) = 3$. Find $f(x)$.
13. Prove that $f(x) = \sin(x) + x^2$ satisfies $f''(x) + f(x) = x^2 + 2$.