

Math 114 Spring 2017
Calculus I HW 7
Due Friday, March 30

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. (★) 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 $f''(x) + f(x) = x^2 + 2$.