Math 114 Fall 2019
Calculus I Practice Homework 8.5
Do not turn in

Note that the odd-numbered problems in Stewart have solutions in the back of the book.

1. Stewart 3.7.25
2. Stewart 3.7.27
3. Stewart 3.7.33
4. Stewart 2.7.35
5. Compute $\lim_{x \to 3} \dfrac{x^2 + x - 2}{x - 1}$
6. Stewart 4.7.1
7. Stewart 4.7.3
8. Stewart 4.7.9
9. Stewart 4.7.27
10. Stewart 4.7.47
11. Suppose $F(0) = 2$ and $F'(x) = x$. Use three steps of our modified Euler's method to estimate $F(3)$.
12. Suppose $F(1) = 1$ and $F'(x) = 1/x^2$. Use four steps of our modified Euler's method to estimate $F(3)$.

    For each of the following problems, do three iterations by hand.

13. Stewart 4.6.7
14. Stewart 4.6.11
15. Stewart 4.6.13
16. Stewart 4.6.15

17. Stewart 4.6.17

18. Find a formula for the quadratic approximation of $x\sin(2x)$ near $x = 0$.

19. Find a formula for the quadratic approximation of $x^2 + 3x - 5$ near $x = 3$.

20. Find a formula for the quadratic approximation of $\sec(x)$ near $x = \pi/4$.