

Math 114 Fall 2018
Calculus I HW 5
Due *Friday* October 12

Make sure you have Stewart essential calculus early transcendentals second edition!

1. Stewart 1.4.50
2. Stewart 1.4.52 (Hint: what trig identities do we know? Can we make one of them show up?)
3. Stewart 1.4.54
4. (★) Stewart 1.5.6
5. (★) Stewart 1.5.8
6. Stewart 1.5.16

7. Let

$$f(x) = \begin{cases} x + 3 & x > 2 \\ x^2 + 1 & x < 2 \end{cases}$$

Define a function that extends f and is continuous at all real numbers.

8. Let

$$g(x) = \begin{cases} x^2 - 5 & x > -1 \\ 4x & x < -1 \end{cases}$$

Define a function that extends g and is continuous at all real numbers.

9. Stewart 1.5.30
10. (★) Stewart 1.5.36
11. Stewart 1.5.40
12. Stewart 1.5.42