

Problem Set 6

October 24, 2021

All numbered exercises are from the textbook *Lectures on Real Analysis*, by F. Larusson.

1. Exercise 8.13.
2. Exercise 8.14.
3. Exercise 8.15.
4. Exercise 8.16.
5. Exercise 8.17.
6. Exercise 8.18.
7. Exercise 8.20. (Note: In this problem, to establish the required upper bound for $e - s_n$, assume that $n \geq 2$.)
8. Exercise 8.21.
9. Exercise 8.25. (Note: In this problem, one needs to use the general form of Lagrange's Theorem, as shown in class, which is valid for Taylor polynomials centered at arbitrary $c \in \mathbb{R}$ and not just $c = 0$.)