College of the Holy Cross, Spring Semester, 2019 Math 134 Worksheet 1 Due Tuesday, January 29

- 1. Calculate L_4 , M_4 and R_4 for $f(x) = \sqrt{x+2}$ over the interval [2,4].
- 2. Let $f(x) = \sqrt{x}$ on the interval [1,5]. Fill in the blank. Express your answer in terms of j and N.

$$R_N = \sum_{j=1}^N$$

- 3. Use the power sum formulas to compute $\sum_{j=1}^{10} 3j^2 + 2j 4$.
- 4. Compute $\lim_{N \to \infty} \sum_{j=1}^{N} \frac{5}{N} + \frac{6j}{N^2}.$
- 5. Calculate $\lim_{N \to \infty} R_N$ for $f(x) = 4x x^2$ on [0, 4].