

Homework Assignment for Week 04

1. (Optional) Section 2.3: Problems 57 (see derivations of this definition in Lecture 03).
2. Section 2.4: Problems 26, 34, 42, 48.
3. Chap 2, Additional and Advanced Exercises: Problems 25 (Hint: $1 - \cos x = 2 \sin^2 \frac{x}{2}$), 26 on page 136.
4. Section 2.5: problems 37 (just find the limit, ignore the continuity question) 64, 67, 68, 77 (Need not graph it).
5. Section 2.6: problems 61, 85, 92, 93, 95, 97.
6. Study definition of the limits in p102, p119, p125 and p131. How would you define the four limits

$$\lim_{x \rightarrow \pm\infty} f(x) = \pm\infty?$$

Verify the statement

$$\lim_{x \rightarrow \infty} -x^3 = -\infty$$

using the definition you wrote.