Problem Set 1
Real Analysis, MATH 5471
Due September 24, 2025

Do the following problems from the text, *Real Analysis*, 4th edition, by R. Bartle and D. Sherbert.

Section 2.1: 1, 3a,b, 6, 16c,d
Section 2.2: 2, 10
Section 2.3: 1, 9
Section 2.4: 3, 8
Section 2.5: 8

In addition, answer the following question.

1. Assume that the Nested Intervals Property is true and use it to prove the Completeness Property of $\mathbb{R}$. (Once you prove this, note that in light of Theorem 2.5.2 of your text, the two properties are equivalent since each implies the other.)