10.6: Alternating Series

Learning Objectives. Upon successful completion of Section 10.6, you will be able to. . .

- Answer conceptual questions involving alternate series.

- Apply the alternating series test if possible. Otherwise, apply a different appropriate test.

- Use Theorem 10.18 to find an upper bound for the error in using the nth partial sum to estimate the value of the series.

- Determine the number of terms needed to ensure a given error.

- Estimate the value of an alternating series.

- Determine if a series converges absolutely, converges conditionally, or diverges.

Part 1: The Divergence Test and P-Series Test

Part 2: The Integral Test and Estimation Theorem