11.1: Approximating Functions with Polynomials

Learning Objectives. Upon successful completion of Section 11.1, you will be able
to. . .

- Answer conceptual questions about Taylor polynomials.

- Use linear and quadratic polynomials to approximate functions.

- Find the Taylor polynomial for a function centered at a specified number.

- Use Taylor polynomials to approximate functions.

- Compare the graph of a function and its Taylor polynomials.

- Find the remainder of an nth order Taylor polynomial for a given function.

- Find the remainder term of a Taylor approximation and use it to estimate error.

Part 1: The Divergence Test and P-Series Test

Part 2: The Integral Test and Estimation Theorem