

CHAPTER OVERVIEW

1: Functions and Graphs

Calculus is the mathematics that describes changes in functions. In this chapter, we review all the functions necessary to study calculus. We define polynomial, rational, trigonometric, exponential, and logarithmic functions. We review how to evaluate these functions, and we show the properties of their graphs. We provide examples of equations with terms involving these functions and illustrate the algebraic techniques necessary to solve them. In short, this chapter provides the foundation for the material to come. It is essential to be familiar and comfortable with these ideas before proceeding to the formal introduction of calculus in the next chapter.

[1.1: Prelude to Functions and Graphs](#)

[1.2: Review of Functions](#)

[1.2E: Exercises for Section 1.1](#)

[1.3: Basic Classes of Functions](#)

[1.3E: Exercises for Section 1.2](#)

[1.4: Trigonometric Functions](#)

[1.4E: Exercises for Section 1.3](#)

[1.5: Inverse Functions](#)

[1.5E: Exercises for Section 1.4](#)

[1.6: Exponential and Logarithmic Functions](#)

[1.6E: Exercises for Section 1.5](#)

[1.7: Chapter 1 Review Exercises](#)

Thumbnail: The graph of $f(x) = e^x$ has a tangent line with slope 1 at $x = 0$. (CC BY; OpenStax)

Contributors and Attributions

Template:ContribOpenStaxCalc

This page titled [1: Functions and Graphs](#) is shared under a [CC BY-NC-SA](#) license and was authored, remixed, and/or curated by .