MA172: Calculus II

Baker University — Spring 2023

Course Outline

Each of the following comes from the text *College Algebra* (OpenStax) via LibreTexts.

Exam 1 — Equations, Inequalities, and Modeling

- §1.2: Real Numbers — Algebra Essentials
- §1.3: Exponents and Scientific Notation
- §1.4: Radicals and Rational Expressions
- §1.5: Polynomials
- §1.6: Factoring Polynomials
- §1.7: Rational Expressions
- §2.2: The Rectangular Coordinate Systems and Graphs
- §2.3: Linear Equations in One Variable
- §2.4: Models and Applications
- §2.5: Complex Numbers
- §2.6: Quadratic Equations
- §2.7: Other Types of Equations
- §2.8: Linear Inequalities and Absolute Value Inequalities

Exam 2 — Functions and Linear Functions

- §3.2: Functions and Function Notation
- §3.3: Domain and Range
- §3.4: Rates of Change and Behavior of Graphs
- §3.5: Composition of Functions
- §3.6: Transformation of Functions

- §3.7: Absolute Value Functions
- §3.8: Inverse Functions
- §4.1: Introduction to Linear Functions
- §4.2: Linear Functions
- §4.3: Modeling with Linear Functions

Exam 3 — Polynomial and Rational Functions

- §5.2: Quadratic Functions
- §5.3: Power Functions and Polynomial Functions
- §5.4: Graphs of Polynomial Functions
- §5.5: Dividing Polynomials
- §5.6: Zeros of Polynomial Functions
- §5.7: Rational Functions
- §5.8: Inverses and Radical Functions
- §5.9: Modeling Using Variation

Final Exam — Exponential and Logarithmic Functions

- §6.2: Exponential Functions
- §6.3: Graphs of Exponential Functions
- §6.4: Logarithmic Functions
- §6.5: Graphs of Logarithmic Functions
- §6.6: Logarithmic Properties
- §6.7: Exponential and Logarithmic Equations