

# Precalculus Review for Calculus I

The following review of Precalculus is based on the book

**Precalculus**, fifth edition, by James Stewart, Lothar Redlin and Saleem Watson

Secondhand copies of this and other editions are available on Amazon.com.

If you do purchase a copy of this book, please keep it for reference throughout Calculus 1 - 3.

## Topics

### Chapter 1 Fundamentals

- Section 1.1. Real Numbers, Absolute value.
- Section 1.2. Exponents and Radicals.
- Section 1.3. Algebraic expressions, Polynomials.
- Section 1.4. Rational Expressions.
- Section 1.5. Equations, Solving Equations, Completing the Square, Quadratic Formula.
- Section 1.6. Modeling with equations.
- Section 1.7. Inequalities.
- Section 1.8. Coordinate Geometry.
- Section 1.10. Lines.

### Chapter 2 Functions

- Section 2.1. What is a Function?, definition, piecewise defined functions, difference quotient, domain of a function.
- Section 2.2. Graphs of Functions.
- Section 2.3. Increasing and Decreasing Functions, Average Rate of Change.
- Section 2.4. Transformations of Functions
- Section 2.5. Quadratic Functions: Maxima and Minima.
- Section 2.6. Modeling with Functions.
- Section 2.7. Combining Functions.

### Chapter 3 Rational Functions

- Section 3.2. Dividing Polynomials
- Section 3.6. Rational Functions

### Chapter 5 Trigonometric Functions of Real Numbers

- Section 5.1. The Unit Circle
- Section 5.2. Trigonometric Functions of Real Numbers
- Section 5.3. Trigonometric Graphs

### Chapter 6 Trigonometric Functions of Angles

- Section 6.1. Angle Measure.
- Section 6.2. Trigonometry of Right Angles.
- Section 6.3. Trigonometric Functions of Angles.

### Extra

- Trigonometric Identities
- Summation Notation.