

Precalculus: Semester I Review

Unit 1: Functions and Their Graphs

- Lines: Slopes, writing equations, and graphs
- Functions: Definition, evaluation, and graphs (including graph shifts)
- Domain/Range
- Transformations of Graphs
- Combinations and Composition of Functions
- Inverse Functions

Unit 2: Polynomial Functions

- Quadratic Functions
- Higher Degree Polynomial Functions
- Zeros of Polynomial Functions
- Complex Numbers
- Modeling: Scatterplots and Regression

Unit 3: Rational Functions

- Rational Functions and their graphs
- Asymptotes/Holes
- Modeling with Rational Functions

Unit 4: Exponential Functions and Logarithmic Functions

- Exponential Functions and Their Graphs
- Logarithmic Functions and Their Graphs
- Solving Exponential and Logarithmic Equations
- Applications of Exponential and Logistic Functions

Unit 5: Introduction to Trigonometric Functions

- Radian and Degree Measure
- Using the Unit Circle
- Right Triangle Trig
- Trig Functions of Any Angle

Unit 6: Graphs of Trig Functions

- Graphs of Sine/Cosine Functions
- Graphs of Secant/Cosecant Functions
- Graphs of Tangent/Cotangent Functions

