

Precalculus, Part 1



How to Take This Course

Complete all the quizzes and the assignment in each unit. Once the quizzes for a unit are complete, you will have access to the unit test. We recommend you complete the unit assignment before you attempt the unit test, the assignment will help you prepare. You will have access to the final when all unit tests are complete and your assignments are graded.

Allow 2-3 days for an assignment to be graded. Read the full [course instructions](#) to understand the course grading.

[Course Instructions](#)

[How This Course Works & Suggested Timeline](#)

[Submitting Your Assignments](#)

[MANDATORY QUIZ - Take me before you begin this course!](#)

[Ask The Teacher](#)

Meet your teacher for this course and ask a question.

If you need help with this course we offer online tutoring. You can find more details about our tutoring services [here](#).

Unit 1: Seeing Structure in Algebraic Expressions

In this unit, you will learn to:

- Identify characteristics of algebraic expressions including terms, variables, constants, and coefficients.
- Simplify polynomials and perform the four basic operations with them.
- Factor polynomials using various factoring methods.
- Simplify rational expressions using factoring.
- Complete operations of rational expressions using addition, subtraction, multiplication, and division.

[1.1 Identifying Key Components of an Expression/ Introduction to Polynomials](#)

[Quiz 1.1](#)

[1.2 Adding, Subtracting, Multiplying & Dividing Polynomials](#)

[Quiz 1.2](#)

[1.3 Factoring Polynomials](#)

[Quiz 1.3](#)

[1.4 Simplifying Rational Expressions](#)

[Quiz 1.4](#)

[1.5 Addition and Subtraction of Rational Expressions](#)

[Quiz 1.5](#)

[1.6 Multiplication and Division of Rational Expressions](#)

[Quiz 1.6](#)

[Unit 1 Assignment: Factoring Binomials and Trinomials](#)

Unit 2: Equations and Inequalities: Writing, Solving and Graphing

In this unit you will learn to:

- Write, solve, and graph linear equations and inequalities.
- Solve systems of linear equations and inequalities.
- Graph and solve quadratic equations.

[2.1 Linear Equations: Writing, Solving, and Graphing](#)

[Quiz 2.1](#)

[2.2 Systems of Linear Equations - Solve by Graphing](#)

[Quiz 2.2](#)

[2.3 Systems of Linear Equations - Solve by Substitution or Elimination \(Combination\)](#)

[Quiz 2.3](#)

[2.4 Solving Systems of Linear Inequalities](#)

[Quiz 2.4](#)

[2.5 Quadratic Equations: Writing, Solving and Graphing](#)

[Quiz 2.5](#)

[Unit 2 Assignment: Using a System of Equations to Solve a Real World Problem](#)

Unit 3 - Introduction to Functions

In this unit you will learn to:

- Identify, evaluate, and perform operations on functions.
- Find the inverses of functions and what they represent.
- Recognize the most common parent functions both algebraically and graphically and how they can be transformed.
- Analyze graphs of functions by their most important characteristics.

[3.1 Defining and Evaluating Functions](#)

[Quiz 3.1](#)

[3.2 Function Operations and Composition of Functions](#)

[Quiz 3.2](#)

[3.3 Inverse Functions](#)

[Quiz 3.3](#)

[3.4 Parent Functions and Transformations](#)

[Quiz 3.4](#)

[3.5 Analyzing Graphs of Functions: Domain, Range, End Behavior](#)

[Quiz 3.5](#)

[3.6 Analyzing Graphs of Functions - Zeros and Intercepts](#)

[Quiz 3.6](#)

[3.7 Analyzing Graphs of Functions: Symmetry and Even/Odd Functions](#)

[Quiz 3.7](#)

[Unit 3 Assignment: Recognizing Functions in Everyday Life](#)

Unit 4: Polynomial, Rational, Exponential and Logarithmic Functions

In this unit you will learn to:

- Analyze and graph polynomial functions.
- Identify key characteristics of a polynomial function by using the remainder, factor, and rational roots theorems as well as Descartes rule of signs.
- Analyze and graph rational, exponential, and logarithmic functions.

[4.1 Polynomial Functions](#)

[Quiz 4.1](#)

[4.2 Remainder & Factor Theorems](#)

[Quiz 4.2](#)

[4.3 Rational Root Theorem and Descartes Rule of Signs](#)

[Quiz 4.3](#)

[4.4 Rational Functions](#)

[Quiz 4.4](#)

[4.5 Exponential Functions](#)

[Quiz 4.5](#)

[4.6 Logarithmic Functions](#)

[Quiz 4.6](#)

[Unit 4 Assignment: Application of an Exponential Function - Compound Interest](#)

Unit 5: Trigonometry

In this unit you will learn to:

- Solve right triangles using the six basic trigonometric functions
- Determine the 16-point unit circle and use it to find trigonometric function values
- Identify and evaluate inverse trigonometric functions
- Solve oblique triangles and find their areas
- Graph trigonometric functions
- Identify several trigonometric identities and use them to find trigonometric values, evaluate trigonometric functions and solve trigonometric equations

[5.1 Right Triangle Trigonometry](#)

[Quiz 5.1](#)

[5.2 Trigonometric Functions on the Unit Circle](#)

[Quiz 5.2](#)

[5.3 Inverse Trigonometric Functions](#)

[Quiz 5.3](#)

[5.4 Finding the Area of a Triangle using the General Formula or Heron's Formula](#)

[Quiz 5.4](#)

[5.5 Law of Sines and Law of Cosines](#)

[Quiz 5.5](#)

[5.6 Graphing Trigonometric Functions](#)

[Quiz 5.6](#)

[5.7 Trigonometric Identities](#)

[Quiz 5.7](#)

[5.8 Sum and Difference Identities](#)

[Quiz 5.8](#)

[5.9 Double and Half Angle Identities & Formulas](#)

[Quiz 5.9](#)

[Unit 5 Assignment: Oblique Triangles in the Real World](#)

Final Exam

Once you have completed all of the unit tests and all of your assignments have been graded, the final exam will become visible.

Warning: You have only ONE attempt at the final.

Are you ready to take the final? We highly recommend you take the practice final first and if you are weak in any area, review the relevant course material again. You have unlimited attempts at the practice final, it will help you to prepare.

Good Luck!

[Practice Final](#)

Certificate of Completion

The "Certificate" and "Request a Course Completion Record" links below are not active, they cannot be accessed until you have completed the final. Upon satisfying this requirement, the links will become active and you can use them.

Before you go, we would appreciate your opinion on the course, please take 1 minute to complete the feedback form. We hope you enjoyed this course!

[Course Feedback](#)

Thank you for taking this course! Let us know what you think about it.

[Request a Course Completion Record](#)

If you need SVHS to send proof of completion directly to your school, complete this form.

If you need a hard copy mailed to your school please make a note of this on the form, use the field 'Instructions for SVHS'. Don't forget to provide the mailing address of your school.

Restricted Not available unless: The activity **Final Exam** is marked complete

[Certificate of Completion](#)

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