

Integrated Math 3, Part 1



How to Take This Course

Using a math notebook, work through each lesson, copying the examples in the videos and reading. When there are practice problems work those out in the notebook as well. As you complete the quizzes, write the problems out in the math notebook to use for test review.

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
- Ask The Teacher
- MANDATORY QUIZ - You have to take this quiz before you begin the course!

Unit 1: Linear Equations and Inequalities

In this unit you will:

- Review linear equations and how to solve them.
- Solve multistep linear equations involving distribution, fractions, and decimals.
- Analyze patterns and learn to recognize an arithmetic sequence, then learn to find the sum of a finite number of terms.
- Solve and graph multiple-step inequalities in one variable.
- Solve and graph compound inequalities in one variable.
- Solve and graph absolute value equations and inequalities in one variable

- 1.1 Solving Linear Equations in One Variable
 - Quiz 1.1
- 1.2 Solving Linear Equations in One Variable - Multiple Steps
 - Quiz 1.2
- 1.3 Arithmetic Sequence and Series
 - Quiz 1.3
- 1.4 Linear Inequalities and Compound Linear Inequalities
 - Quiz 1.4
- 1.5 Absolute Value Equations and Inequalities
 - Quiz 1.5

- Unit 1 Assignment: Real World Absolute Value
- Unit 1 Test

Restricted Not available (hidden) unless:

- The activity Quiz 1.1 is marked complete
- The activity Quiz 1.2 is marked complete
- The activity Quiz 1.3 is marked complete
- The activity Quiz 1.4 is marked complete
- The activity Quiz 1.5 is marked complete

Unit 2: Linear Functions

In this unit you will learn to:

- Recognize functions based on a set of data, graphs, and descriptions.
- Calculate slope, identify slope given points and lines, identify the slope of the graphed line.
- Identify characteristics of parallel and perpendicular lines and write the equations of lines that are parallel and perpendicular to a given line.
- Apply the characteristics of parallel and perpendicular lines on the coordinate plane to polygons.
- Model real-world problems with linear equations.

- 2.1 What is a Function?
 - Quiz 2.1
- 2.2 Calculating Slope and Slope-Intercept Form
 - Quiz 2.2
- 2.3 Parallel and Perpendicular Lines
 - Quiz 2.3
- 2.4 Writing Equations of Lines
 - Quiz 2.4
- 2.5 Geometry on the Coordinate Plane
 - Quiz 2.5
- 2.6 Modeling Linear Equations
 - Quiz 2.6

- Unit 2 Assignment: Modeling Linear Equations
- Unit 2 Test

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- The activity Quiz 2.1 is marked complete
- The activity Quiz 2.2 is marked complete
- The activity Quiz 2.3 is marked complete
- The activity Quiz 2.4 is marked complete
- The activity Quiz 2.5 is marked complete
- The activity Quiz 2.6 is marked complete

Unit 3: Systems of Linear Equations

In this unit you will learn to:

- Identify lines that have a single solution, graph systems of equations to determine a solution, and recognize characteristics of pairs of lines that result in consistent and inconsistent equations.
- Solve systems of equations by substitution and elimination method
- Solve systems of inequalities by graphing.
- Write pairs of equations to model real-world problems and model equations with three variables.
- Solve systems of three equations and three variables.

- 3.1 Graphing Systems of Linear Functions
 - Quiz 3.1
- 3.2 Solving Systems of Linear Functions
 - Quiz 3.2
- 3.3 Graphing Inequality Functions & Systems of Inequality Functions
 - Quiz 3.3
- 3.4 Graphing & Solving Linear Equations - 3 Variables
 - Quiz 3.4
- 3.5 Modeling Systems of Equations
 - Quiz 3.5

- Unit 3 Assignment: The Wave
- Unit 3 Test

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- The activity Quiz 3.1 is marked complete
- The activity Quiz 3.2 is marked complete
- The activity Quiz 3.3 is marked complete
- The activity Quiz 3.4 is marked complete
- The activity Quiz 3.5 is marked complete

Unit 4: Quadratic Equations and Functions

In this unit you will learn:

- The various forms of a quadratic equation and how to solve a quadratic equation by factoring
- How to use the process of completing the square to write a quadratic function in the vertex form
- Solve un-factorable quadratic equations by using the quadratic formula
- How to find the square root of a negative number and other properties of imaginary numbers.
- Analyze a quadratic function such as identifying the domain, range, maximum and minimum points.
- How to graph piecewise functions that include linear and quadratic functions.

- 4.1 Solving Quadratic Equations - Factoring
 - Quiz 4.1
- 4.2 Solving Quadratic Equations by Completing the Square and the Quadratic Formula
 - Quiz 4.2
- 4.3 Quadratics with Complex Roots
 - Quiz 4.3
- 4.4 Graphing Quadratic Functions
 - Quiz 4.4
- 4.5 Piecewise Functions
 - Quiz 4.5

- Unit 4 Assignment: The Quadratic Selfie
- Unit 4 Test

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- The activity Quiz 4.2 is marked complete
- The activity Quiz 4.3 is marked complete
- The activity Quiz 4.4 is marked complete
- The activity Quiz 4.5 is marked complete

Unit 5: Polynomial Equations and Functions

In this unit you will learn to:

- Identify polynomials and add and subtract polynomials.
- Multiply a monomial by a polynomial (distribute) and learn multiple polynomials with a varying number of terms.
- Use long division to divide polynomials that can not be factored
- Use synthetic division to determine remainders and apply this to evaluating polynomials.
- Use the Remainder and Factor theorem to decompose a polynomial into the product of binomials.
- Apply the conjugate and real root theorem to identify the factors of polynomials as well as write the equation of polynomials given roots.
- Apply the Fundamental Theorem of Algebra to determine the number of roots of a polynomial, the roots and write a polynomial given roots.

- 5.1 What is a Polynomial? Computations with Polynomials
 - Quiz 5.1
- 5.2 Multiplication of Polynomials
 - Quiz 5.2
- 5.3 Long Division of Polynomials
 - Quiz 5.3
- 5.4 Synthetic Division/Substitution
 - Quiz 5.4
- 5.5 Remainder and Factor Theorem
 - Quiz 5.5
- 5.6 Conjugate and Real Root Theorems
 - Quiz 5.6
- 5.7 Fundamental Theorem of Algebra
 - Quiz 5.7

- Unit 5 Assignment: Solving Polynomial Equations
- Unit 5 Test

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- The activity Quiz 5.1 is marked complete
- The activity Quiz 5.2 is marked complete
- The activity Quiz 5.3 is marked complete
- The activity Quiz 5.4 is marked complete
- The activity Quiz 5.5 is marked complete
- The activity Quiz 5.6 is marked complete
- The activity Quiz 5.7 is marked complete

Unit 6: Radical Equations and Functions

In this unit you will learn to:

- Simply exponents, solve equations with exponents, simplify with rational exponents, and raise an exponent to a power.
- Divide with exponents and simplify negative exponents.
- Simplify radicals, rationalize denominators, and compute with radicals.
- Solve radical equations with one and two radicals.
- Graph radical functions and transform from a parent function.

- 6.1 Rational Exponents and Expressions
 - Quiz 6.1
- 6.2 More Laws of Exponents
 - Quiz 6.2
- 6.3 Computations with Radical Expressions
 - Quiz 6.3
- 6.4 Solving Equations with Rational Exponents, Solving Radical Equations
 - Quiz 6.4
- 6.5 Graphing Radical Functions
 - Quiz 6.5

- Unit 6 Assignment: Radical Equations
- Unit 6 Test

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Unit 7: Rational Expressions, Equations and Functions

In this unit you will learn to:

- Simplify, add and subtract rational expressions
- Multiply and divide rational expressions.
- Solve rational equations.
- Analyze rational equations including asymptotes, end behavior, and zeros.

- 7.1 Simplifying Rational Expressions
 - Quiz 7.1
- 7.2 Multiplying & Dividing Rational Expressions
 - Quiz 7.2
- 7.3 Solving Rational Equations
 - Quiz 7.3
- 7.4 Graphing Rational Functions
 - Quiz 7.4
- 7.5 Modeling with Rational Functions and Expressions
 - Quiz 7.5

- Unit 7 Assignment: Math on the Street - Rational Equations
- Unit 7 Test

Restricted Not available (hidden) unless:

- The activity Quiz 7.1 is marked complete
- The activity Quiz 7.2 is marked complete
- The activity Quiz 7.3 is marked complete
- The activity Quiz 7.4 is marked complete
- The activity Quiz 7.5 is marked complete

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
- Final Exam

Restricted Not available (hidden) unless:

- The activity Unit 1 Test is marked complete
- The activity Unit 2 Test is marked complete
- The activity Unit 3 Test is marked complete
- The activity Unit 4 Test is marked complete
- The activity Unit 5 Test is marked complete
- The activity Unit 6 Test is marked complete
- The activity Unit 7 Test is marked complete
- The activity Unit 1 Assignment: Real World Absolute Value is marked complete
- The activity Unit 2 Assignment: Modeling Linear Equations is marked complete
- The activity Unit 3 Assignment: The Wave is marked complete
- The activity Unit 4 Assignment: The Quadratic Selfie is marked complete
- The activity Unit 5 Assignment: Solving Polynomial Equations is marked complete
- The activity Unit 6 Assignment: Radical Equations is marked complete
- The activity Unit 7 Assignment: Math on the Street - Rational Equations is marked complete

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
- Request a Course Completion Record

If you need SVHS to find proof of your course 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.

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- Certificate of Completion

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