

Integrated Math 2, 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.

[Instructions for the Course](#)

[How This Course Works](#)

[Submitting Assignments](#)

[Ask The Teacher](#)

Meet your teacher for this course and ask a question.



Unit 1: Characteristics of Functions

Functions describe a special relationship where every input value has one output value. In our culture today, it could be thought of as a typing in a URL. When a specific website URL is typed in to the omni box, one website appears. This is different from searching, which is the idea of a relation. When a word or phrase is typed into the search bar, many options appear. In a relation, an input value can have many different output values. This unit covers:

- Absolute value functions where all the output values are positive.
- Variation functions which describe either a direct proportional relationship between variables or a inverse relationship that as one increases the other decreases by a constant proportion.
- Inverse function is a function that "undoes" the original function.
- Positive, negative and rational exponents.
- Exponential functions.

[1.1 Absolute Value Functions](#)

[Quiz 1.1](#)



[1.2 Direct and Inverse Variation Functions](#)

[Quiz 1.2](#)




[1.3 Inverse Functions](#)

[Quiz 1.3](#)




[1.4 Properties of Exponents](#)


 Quiz 1.4




 1.5 Radical and Rational Exponents

 Quiz 1.5



 1.6 Exponential Functions

 Quiz 1.6



 Unit 1: Compare functions





Unit 2: Polynomial Operations

This unit covers operations with polynomials. A polynomial can be added, subtracted, multiplied and divided just like real numbers. It is said that a polynomial is closed for addition, subtraction, multiplication and division.


This unit covers:


- Addition and subtraction of polynomials
- Identifying special polynomials
- Factoring simple and complex quadratic equations
- Factoring special quadratics
- Solving quadratic equations

 2.1 Adding/Subtracting Polynomials


 Quiz 2.1




 2.2 Multiplying Polynomials

 Quiz 2.2




 2.3 Special Polynomials

 Quiz 2.3




 2.4 Factor $x^2 + bx + c$

 Quiz 2.4




 2.5 Factor $ax^2 + bx + c$


 Quiz 2.5




 2.6 Factoring Special Products


 Quiz 2.6




 2.7 Factoring Polynomials Completely


 Quiz 2.7



 2.8 Solving Polynomial Equations

 Quiz 2.8



 Unit 2 Assignment: Factoring Flowchart



Unit 3: Graphing Quadratic Functions

In the first unit, functions were introduced. A function is a set of values where an input value has one output value. A quadratic function has a special shape, and the leading coefficient determines if the quadratic opens upward or downward.

- Graphing the parent function
- Graphing a quadratic in different forms
- Vertical and Horizontal shifts in quadratics
- Find the vertex of a quadratic
- Finding the focus
- Comparing linear, quadratic and exponential functions.

 3.1 Graphing Parabolas Standard Form

3.1 Graphing Parabolas Standard Form	Quiz 3.1	
3.2 Graphing Parabolas with Vertical Shifts and in Vertex Form	Quiz 3.2	
3.3 Graphing Parabolas in factored form: $f(x) = a(x - p)(x - q)$	Quiz 3.3	
3.4 Comparing Linear, Exponential, and Quadratic Functions	Quiz 3.4	
Unit 3 Assignment: Angry Birds Equations		

Unit 4: Solving Quadratic Equations

Polynomials, in particular, quadratics, had been introduced in previous units. This unit will focus on solving quadratic equations that can not be factored.

This unit covers:

- Simplification and operations with radicals
- Solving a quadratic using roots
- Solving a quadratic by completing the square
- Developing and using the quadratic formula
- Complex numbers
- Solving equations with complex solutions

4.1 Properties of Radicals	Quiz 4.1	
4.2 Solving Quadratic Equations By Graphing	Quiz 4.2	
4.3 Solving Quadratic Equations by Using Square Roots	Quiz 4.3	
4.4 Solving Quadratic Equations By Completing the Square	Quiz 4.4	
4.5 Solving Quadratic Equations By Using the Quadratic Formula	Quiz 4.5	
4.6 Solving Quadratic Equations with Complex Solutions	Quiz 4.6	
Unit 4 Assignment: Trinomial Blunders		


Unit 5: Relationship within Triangles


This unit will shift into geometric topics. The triangle is a foundational polygon in Geometry.

This unit will cover:


- Geometric relationships of triangles
- Perpendicular bisectors and circumcenter
- Angle bisectors and incenter
- Medians and altitudes
- Midsegment Theorem

5.1 Proving Geometric Relationships	Quiz 5.1	
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 5.2 Perpendicular Bisectors and Circumcenter

 Quiz 5.2


 5.3 Angle Bisectors and Incenter

 Quiz 5.3


 5.4 Medians and Altitudes of Triangles


 Quiz 5.4


 5.5 The Triangle Mid Segment Theorem

 Quiz 5.5

 5.6 Indirect Proof and Inequalities in One Triangle

 Quiz 5.6

 5.7 Inequalities in Two Triangles

 Quiz 5.7

 Unit 5 Assignment: Geometric Constructions


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


Course 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 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 full mailing address of your school.

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

 Certificate of Completion

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