

# Geometry, Part 1

## ATTENTION

Grading at the end of the semester takes at least 7 days!  
Submit your assignments at least two weeks before your semester end.



## 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 at least 3 school days for an assignment to be graded. Read the [full course instructions](#) it will help you understand how the course is weighted.

### Course Instructions

### How This Course Works & Suggested Timeline

### Submitting Your Assignments

### Ask The Teacher

Meet your teacher for this course and ask a question.

**Need help with the course?** We offer online tutoring; find more details about it [here](#).

### MANDATORY QUIZ

✔ Done! Receive a grade

You are required to take this quiz before you start the course. To prepare, read the course instructions and the "submitting your assignments" document, watch the video on the how this course works page and review the suggested timeline.

## Unit 1: Foundations of Geometry

Throughout this unit, lessons will introduce the foundations of Geometry, including points, lines, and planes. Lessons will concentrate on the fundamentals of points, angles, lines, planes, segments, polygons, circles, and constructions. Measurements using perimeter, circumference, and area will also be introduced.

### Unit 1 Study Guide

This study guide will help you preview the concepts and guide your learning as each new skill or concept is introduced. Use this study guide as the foundation of your notes. You may use it on the unit quizzes, unit tests, and course final.

Click on the link above, and make a copy of the file; you can open the document in Google docs. If you prefer to print it, it is available as a PDF.

### 1.1 Points, Lines, and Planes

#### Quiz 1.1

To do: Receive a grade

### 1.2 Measuring Segments

#### Quiz 1.2

To do: Receive a grade

### 1.3 Measuring Angles

#### Quiz 1.3

To do: Receive a grade

### 1.4 Angle Relationship & Angle Pairs

#### Quiz 1.4

To do: Receive a grade

### 1.5 Constructions

#### Quiz 1.5

To do: Receive a grade

### 1.6 Classifying Polygons

#### Quiz 1.6

To do: Receive a grade

### 1.7 Perimeter and Area

#### Quiz 1.7

To do: Receive a grade

### 1.8 Circle and Its Parts

#### Quiz 1.8

To do: Receive a grade

### Unit 1 Assignment: Foundations of Geometry Dictionary

To do: Receive a grade

## Unit 2: Reasoning & Proofs

In this unit, we will learn the basic principles of reasoning, including deductive and inductive reasoning. What conditional statements are, as well as converse, inverse, and contrapositive statements. To use logic and to develop algebraic, segment, and angle proofs.

### Unit 2 Study Guide

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### 2.1 Conditional Statements

#### Quiz 2.1

To do: Receive a grade

### 2.2 Inductive and Deductive Reasoning

#### Quiz 2.2

To do: Receive a grade

### 2.3 Postulates, Theorems and Intro to Proofs

#### Quiz 2.3

To do: Receive a grade

### 2.4 Algebraic Proofs

#### Quiz 2.4

To do: Receive a grade

### 2.5 Segment Proofs

#### Quiz 2.5

To do: Receive a grade

### 2.6 Angle Proofs

#### Quiz 2.6

To do: Receive a grade

### Unit 2 Assignment: The Logic of Advertising

To do: Receive a grade

## Unit 3: Parallel and Perpendicular Lines

In this unit, we will learn the nature of the angles formed when parallel lines are divided by a transversal. To prove lines are parallel, perpendicular or Neither. You will use information, like slope and a given point, to write an equation of a line. You will be able to identify three different forms of an equation of a line including slope-intercept, point-slope and standard form.

### Unit 3 Study Guide

This study guide will help you preview the concepts and guide your learning as each new skill or concept is introduced. Use this study guide as the foundation of your notes. You may use it on the unit quizzes, unit tests, and course final.

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### 3.1 Lines and Angles

#### Quiz 3.1

To do: Receive a grade

### 3.2 Parallel Lines and Algebra

#### Quiz 3.2

To do: Receive a grade

### 3.3 Proving Lines Parallel

#### Quiz 3.3

To do: Receive a grade

### 3.4 Slope and Equations of Lines

#### Quiz 3.4

To do: Receive a grade

### 3.5 Perpendicular Lines

#### Quiz 3.5

To do: Receive a grade

### Unit 3 Assignment: Geometry City Project

To do: Receive a grade

## Unit 4: Congruence

In this unit, you will learn the minimum requirements to determine whether or not two figures are congruent and congruency in other figures. You will use SSS, SAS, AAS, ASA, and HL to prove triangles are congruent. You will learn to recognize and learn the key parts of isosceles and equilateral triangles. These properties will be used to prove corresponding parts of congruent triangles are congruent (CPCTC).

### Unit 4 Study Guide

This study guide will help you preview the concepts and guide your learning as each new skill or concept is introduced. Use this study guide as the foundation of your notes. You may use it on the unit quizzes, unit tests, and course final.

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### 4.1 Congruent Figures

#### Quiz 4.1

To do: Receive a grade

### 4.2 Classifying Triangles & Angles of Triangles

#### Quiz 4.2

To do: Receive a grade

### 4.3 Congruent Triangles by SSS and SAS

#### Quiz 4.3

To do: Receive a grade

### 4.4 Congruent Triangles by ASA & AAS

#### Quiz 4.4

To do: Receive a grade

### 4.5 Isosceles vs. Equilateral Triangles & CPCTC

#### Quiz 4.5

To do: Receive a grade

### 4.6 Pythagorean Theorem & HL

#### Quiz 4.6

To do: Receive a grade

### Unit 4 Assignment: Lines & Angles

To do: Receive a grade

## Unit 5: Relationships in Triangles

In this unit, you will learn the anatomy of triangles, including mid-segments, perpendicular bisectors, angle bisectors, medians, and altitudes of triangles. The concept of indirect proofs. The idea of inequalities in one triangle and inequalities in two triangles. The concept of the construction center of the triangle.

### Unit 5 Study Guide

This study guide will help you preview the concepts and guide your learning as each new skill or concept is introduced. Use this study guide as the foundation of your notes. You may use it on the unit quizzes, unit tests, and course final.

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### 5.1 Midsegments of a Triangle

#### Quiz 5.1

To do: Receive a grade

### 5.2 Perpendicular and Angle Bisectors

#### Quiz 5.2

To do: Receive a grade

### 5.3 Medians and Altitudes of Triangles

#### Quiz 5.3

To do: Receive a grade

### 5.4 Indirect Proofs

#### Quiz 5.4

To do: Receive a grade

### 5.5 Inequalities in One and Two Triangles

#### Quiz 5.5

To do: Receive a grade

### 5.6 Constructing Centers of Triangles

#### Quiz 5.6

To do: Receive a grade

### Unit 5 Assignment: Triangle Relationships Poster

To do: Receive a grade

## Unit 6: Similarity

In this unit, you will learn the concept of ratio and proportion and use them to solve problems involving angle measures. You will also recognize the conditions that will make polygons similar, prove that triangles are similar using similarity theorems, and use the geometric mean to solve for the missing lengths of a triangle. In addition, you will also use proportionality to find the missing lengths in a triangle containing parallel lines.

### Unit 6 Study Guide

This study guide will help you preview the concepts and guide your learning as each new skill or concept is introduced. Use this study guide as the foundation of your notes. You may use it on the unit quizzes, unit tests, and course final.

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### 6.1 Ratios and Proportions

#### Quiz 6.1

To do: Receive a grade

### 6.2 Similar Polygons and Scale Factor

#### Quiz 6.2

To do: Receive a grade

### 6.3 Proving Triangles are Similar

#### Quiz 6.3

To do: Receive a grade

### 6.4 Geometric Mean and Parts of Similar Triangles

#### Quiz 6.4

To do: Receive a grade

### 6.5 Parallel Lines and Proportional Parts

#### Quiz 6.5

To do: Receive a grade

### Unit 6 Assignment: Teaching Similar Figures

To do: Receive a grade

## 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.

Remember, if you want to improve your grade in this course, you need to do that BEFORE you take the final exam.

Good Luck!!

### Practice Final

## Course Completion & Requesting a Transcript

**Warning:** If you are waiting for a resubmitted assignment to be graded, do NOT generate any course completion record until the teacher has graded it.

**Transcript** - Send a transcript to your school to report the credits you earned. A transcript will list all the courses you have taken with us, including those still in progress.

**Course Certificate** - The link cannot be accessed until you have completed the final. Upon satisfying this requirement, the link will become active.

**Feedback** - 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 Transcript

Notify your school that you have completed your course. Send them a transcript by email or mail. A transcript will list all the courses you have completed and those in progress.

### Certificate of Completion

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