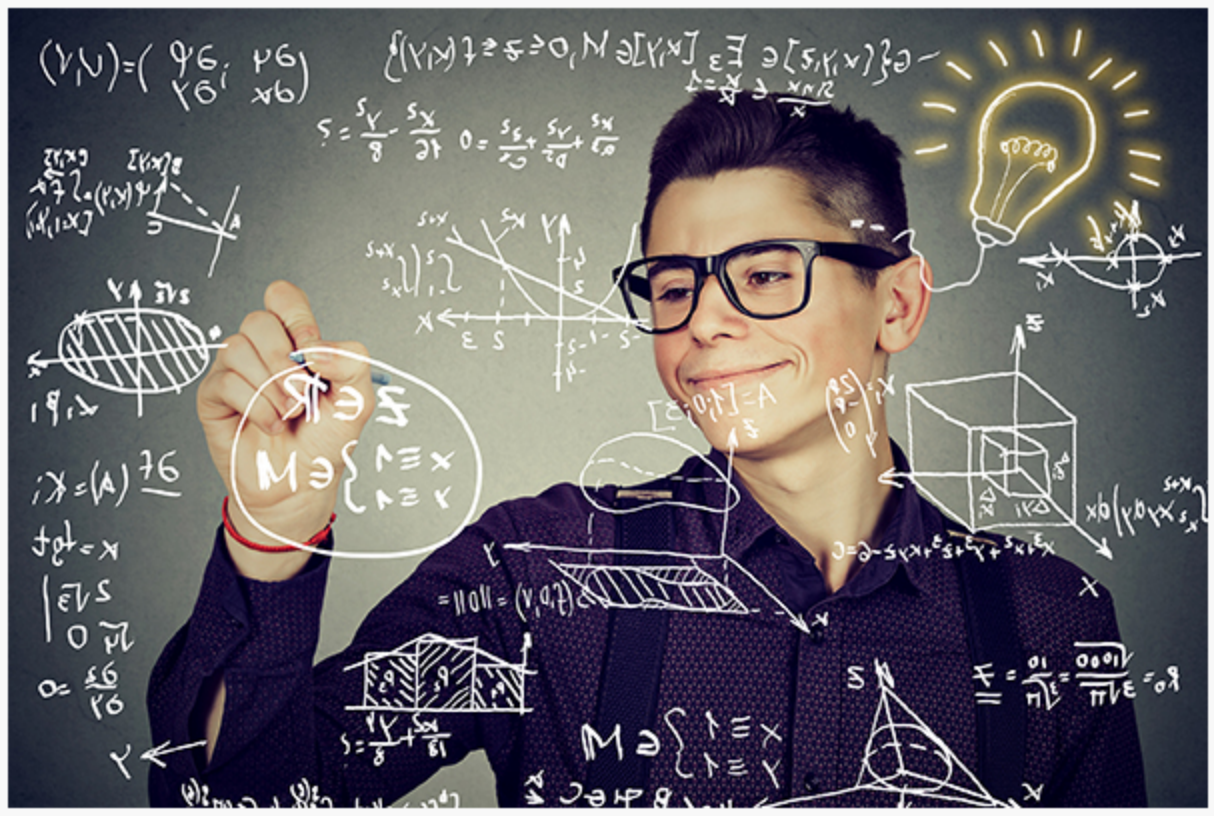
General

Geometry, 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. You will have access to the final exam when all of the unit tests are complete, and the assignments are completed and graded.

Please allow for 2-3 days per assignment for grading. Read the full course instructions so you understand how this course works.

- How This Course Works
- Instructions for the Course
- Ask The Teacher

  Meet your teacher for this course and ask a question.

Unit 1. Introduction to Geometry

In this unit we will learn the basic concepts in Geometry, including the ideas of points, lines and planes. To measure segments, as well as angles, and the classifications of the different types of angles. The angle pair relationships, including vertical angles, linear pairs, supplementary angles, and complementary angles, to name a few. To classify polygons, from concave and convex, to naming them by the number of sides they have.

- 1.1 Points, Lines, & Planes
  - 1.1 Quiz
- 1.2 Measuring Segments
  - 1.2 Quiz
- 1.3 Measuring & Classifying Angles
  - 1.3 Quiz
- 1.4 Angle Pair Relationships
  - 1.4 Quiz
- 1.5 Classifying Polygons

1.5 Quiz

Unit 1 Assignment

Unit 2. Reasoning & Proof

In this unit we will learn the basic principles in reasoning, including deductive and inductive reasoning. What conditional statements are, as well as converse, inverse, and contrapositive statements. To use logic and to perform proofs to prove angles congruent.

2.1 Inductive Reasoning

2.1 Quiz

2.2 Deductive Reasoning

2.2 Quiz

2.3 Conditional Statements

2.3 Quiz

2.4 Proving Angles Congruent

2.4 Quiz

Unit 2 Assignment

Unit 3. Perpendicular & Parallel Lines

In this unit we will learn the nature of the angles formed when parallel lines are divided by a transversal. To prove lines parallel or perpendicular using slope, and other methods. To use information, like slope and a given point, to write an equation of a line.

3.1 Parallel Lines With Transversals

3.1 Quiz

3.2 Proving Lines Parallel

3.2 Quiz

3.3 Parallel vs. Perpendicular - Using Slope

3.3 Quiz

3.4 Write Equations of Lines

3.4 Quiz

Unit 3 Assignment

Unit 4. Congruent Triangles

In this unit we will learn the minimum requirements to determine whether or not two figures are congruent, and will prove polygons congruent. We will work on triangle congruency proofs, including SSS, SAS, AAS, ASA, and HL. We will learn to recognize and learn the key parts of isosceles and equilateral triangles; as well as to use CPCTC to prove other parts of triangles congruent.

4.1 Congruent Figures

4.1 Quiz

4.2 Congruent Triangles by SSS & SAS

4.2 Quiz

4.3 Congruent Triangles by AAS, ASA, & HL

4.3 Quiz

4.4 Isosceles and Equilateral Triangles

4.4 Quiz

- 4.5 Corresponding Parts of Congruent Triangles
  - 4.5 Quiz
- Unit 4 Assignment

Unit 5. Anatomy of Triangles

In this unit we will learn the anatomy of triangles including mid-segments, perpendicular bisectors, angle bisectors, medians, and altitudes of triangles.The concept of inequalities in one triangle as well as inequalities in two triangles.

- 5.1 Midsegments of Triangles
  - 5.1 Quiz
- 5.2 Perpendicular Bisectors of Triangles
  - 5.2 Quiz
- 5.3 Angle Bisectors of Triangles
  - 5.3 Quiz
- 5.4 Medians & Altitudes
  - 5.4 Quiz
- 5.5 Inequalities in One Triangle
  - 5.5 Quiz
- 5.6 Inequalities in Two Triangles
  - 5.6 Quiz
- Unit 5 Assignment

Unit 6. Similarity

In this unit we will learn what ratios are and how to use proportions to solve problems involving ratios. What the geometric mean is and how to use it to solve for sides of triangles. To prove triangles similar using AA, SSS, and SAS and what similarity is, and to understand the implications of similarity in right triangles.

- 6.1 Ratios & Proportions
  - 6.1 Quiz
- 6.2 The Geometric Mean
  - 6.2 Quiz
- 6.3 Similar Polygons
  - 6.3 Quiz
- 6.4 Prove Triangles Similar by AA
  - 6.4 Quiz
- 6.5 Prove Triangles Similar by SSS & SAS
  - 6.5 Quiz
- 6.6 Similarity in Right Triangles
  - 6.6 Quiz
- Unit 6 Assignment

The Final Exam

Complete all of the assignments and unit tests in this course. Once they are complete and the assignments have been graded, the Final will be made available and appear below the Practice Final

Warning: You have only ONE attempt at the Final. You must score 60% or higher in the Final to receive credit for the course!

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 Exam

Course Completion

The "Certificate" and "Transcript Request" links below are not active, they cannot be accessed until you have achieved at least 60% on both the final and for the course total. Upon satisfying these two requirements, 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.

Restricted Not available unless:

- You achieve a required score in **Course total**
- You achieve a required score in **Final Exam**