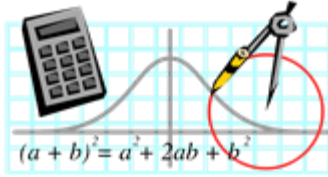


# HomeSchoolMathOnline.com Geometry Course Checklist

HomeSchoolMathOnline.com



Free Video Math Courses

Name\_\_\_\_\_

Date Started Course\_\_\_\_\_

Date Completed Course\_\_\_\_\_

## How To Upgrade Your Course Experience:

With a TabletClass full course membership you will be able to work on lots of practice problems with full video explanations you will also get access to extra worksheets, tests/keys, notes and skill software.

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# Introduction

## Special Message from the Teacher:

Welcome to the HSMO/TabletClass Math Basic Geometry course. First I want to say that I'm very excited to have you as a student. My goal is to give you an enjoyable and high quality learning experience. Moreover I want you to know that you can master this material if you work hard and never give up. The secret to being successful in mathematics is your approach to studying the topic- i.e. your study habits. From years of teaching math I can say that those students with the best study habits almost always earn the top grades. As such, parents and teachers must focus on holding students accountable for the quality of their work.

Below are critical guidelines for students as they take the course:

1. Never give up- especially when a topic is not understood easily or immediately.
2. Strive to be as neat and organized as possible.
3. Excellent note taking is a must to succeed in math.
4. Show all steps when working problems.
5. Double check your work as you write your solution steps.
6. Always go back and review incorrect problems and discover where the error was made.
7. Master the fundamentals and don't move forward unless you understand previous material.

Remember the course material builds on itself so you want to ensure that you don't skip chapters and sections. Furthermore you want to correct your weak areas before moving onto the next topic. Lastly, I want to stress that you can be great in math if you work hard. Even if you have struggled in math before I want you to look at this course as a fresh start in your mathematics journey- I know in my heart you can ace this course!

Best of luck!

John Zimmerman

HSMO/ TabletClass Math Teacher

# Geometry Course

## Chapter 1

### Chapter 1: Foundations for Geometry

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

This chapter will introduce students to the key terms and concepts in geometry. Students will learn how to write the notation for various geometric expressions like angles, lines, rays, planes, points and segments. Lastly, the concept of theorems and postulates are introduced and their importance explained.

Section Summary (circle / complete after chapter is finished):

#### 1. Welcome to Geometry

totally understand | kind of understand | not understanding

#### 2. Points, Lines and Planes

totally understand | kind of understand | not understanding

#### 3. Line Segments, Rays

totally understand | kind of understand | not understanding

#### 4. Angles

totally understand | kind of understand | not understanding

#### 5. Theorems and Postulates

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 2

### Chapter 2: Reasoning and Proof

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will study the role of logic and proof in geometry. Students will learn how to identify the hypothesis and conclusion in conditional statements and write the converse. In addition, students will learn more about the properties of lines and angles. Lastly, students will learn the structure of a geometric proof and study the steps to write an entire proof on their own.

Section Summary (circle / complete after chapter is finished):

#### 1. Conditional Statements and Converses

totally understand | kind of understand | not understanding

#### 2. Algebra Properties

totally understand | kind of understand | not understanding

#### 3. Deductive and Inductive Reasoning

totally understand | kind of understand | not understanding

#### 4. More on Angles and Lines

totally understand | kind of understand | not understanding

#### 5. How to Plan and Write a Proof

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 3

### Chapter 3: Perpendicular and Parallel Lines, Polygons

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will study the relationships of perpendicular and parallel lines. Several important properties will be covered that are essential to solve common problems in geometry. A critical section in this chapter is dedicated to theorems that state when two or more lines are parallel. Students are also introduced to polygons and their types.

Section Summary (circle / complete after chapter is finished):

#### 1. Parallel Lines and Transversals

totally understand | kind of understand | not understanding

#### 2. Properties of Parallel and Perpendicular Lines

totally understand | kind of understand | not understanding

#### 3. Proving Lines Parallel

totally understand | kind of understand | not understanding

#### 4. Introduction to Polygons

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 4

### Chapter 4: Congruent Triangles

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

Congruency is a core concept in geometry. Students will learn the concept of congruency by studying the properties of congruent triangles. After an introduction to congruent figures students will focus on learning to prove triangles are congruent using the SSS, SAS, ASA, AAS and HL Theorems.

Section Summary (circle / complete after chapter is finished):

#### 1. Congruent Figures

totally understand | kind of understand | not understanding

#### 2. Proving Congruent Triangles: Side-Side-Side and Side-Angle-Side Theorem

totally understand | kind of understand | not understanding

#### 3. Proving Congruent Triangles: Angle-Side-Angle and Angle-Angle-Side Theorem

totally understand | kind of understand | not understanding

#### 4. Proving Congruent Triangles: Hypotenuse-Leg Theorem

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 5

### Chapter 5: Properties of Triangles

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn the various properties of triangles. Several definitions and theorems will be introduced about the medians, altitudes and bisectors of triangles. In addition the chapter has an important section on the inequalities found in triangles between sides and angles.

Section Summary (circle / complete after chapter is finished):

#### 1. Medians, Altitudes and Bisectors

totally understand | kind of understand | not understanding

#### 2. Bisector Theorems

totally understand | kind of understand | not understanding

#### 3. Triangle Inequalities

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 6

### Chapter 6: Quadrilaterals

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn the various properties and type of quadrilaterals. The first two sections focus on the properties of parallelograms to include proving a quadrilateral is a parallelogram. Next additional sections look in-depth at trapezoids, special quadrilaterals to include the rhombus and theorems involving midpoints in quadrilaterals and triangles.

Section Summary (circle / complete after chapter is finished):

#### 1. Parallelograms

totally understand | kind of understand | not understanding

#### 2. Proving Quadrilaterals are Parallelograms

totally understand | kind of understand | not understanding

#### 3. Trapezoids

totally understand | kind of understand | not understanding

#### 4. Special Quadrilaterals

totally understand | kind of understand | not understanding

#### 5. Quadrilaterals, Triangles and Midpoints

totally understand | kind of understand | not understanding



# Geometry Course

## Chapter 7

### Chapter 7: Similarity

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

Similarity is a core geometric relationship. To solve most similar polygon problems students need to have the algebra skills to solve ratios and proportions, hence this is the first section in the chapter. The remaining sections focus on similar polygon problem solving and the properties and theorems of similar triangles.

Section Summary (circle / complete after chapter is finished):

#### 1. Ratios and Proportions

totally understand | kind of understand | not understanding

#### 2. Similar Polygons

totally understand | kind of understand | not understanding

#### 3. Similar Triangles

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 8

### Chapter 8: Transformations

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn to apply transformations to images. Sections in the chapter focus on the transformations of reflections, rotations, dilations, translations and glide reflections. An emphasis is placed on developing the skills to construct the graphs of transformations found in common geometry problems.

Section Summary (circle / complete after chapter is finished):

#### 1. Reflections

totally understand | kind of understand | not understanding

#### 2. Rotations and Dilations

totally understand | kind of understand | not understanding

#### 3. Translations and Glide Reflections

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 9

### Chapter 9: Right Triangles and Trigonometry

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn a wide array of concepts about right triangles. Sections in the chapter look at similar right triangles, the Pythagorean Theorem and special right triangles. For most students the section on trigonometry will be their first introduction to the topic. The chapter ends on a section that applies right triangle trigonometry to solving word problems.

Section Summary (circle / complete after chapter is finished):

#### 1. Similar Right Triangles

totally understand | kind of understand | not understanding

#### 2. The Pythagorean Theorem

totally understand | kind of understand | not understanding

#### 3. Special Right Triangles

totally understand | kind of understand | not understanding

#### 4. Trigonometric Ratios

totally understand | kind of understand | not understanding

#### 5. Right Triangle Word Problems

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 10

### Chapter 10: Circles

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn the important properties and relationships found in circles. First, students will learn the parts of a circle and understand the properties of a tangent line. Additional sections will explore key theorems about arcs, chords and inscribed circles. Lastly, the chapter looks at other angle and segment relationships found in circles.

Section Summary (circle / complete after chapter is finished):

#### 1. Introduction to Circles and Tangents

totally understand | kind of understand | not understanding

#### 2. Arcs and Chords

totally understand | kind of understand | not understanding

#### 3. Inscribed Circles

totally understand | kind of understand | not understanding

#### 4. Other Angle Relationships in Circles

totally understand | kind of understand | not understanding

#### 5. Segment Lengths and Circles

totally understand | kind of understand | not understanding

# Geometry Course

## Chapter 11

### Chapter 11: Area and Volume

(Date started \_\_\_\_\_ | Date completed \_\_\_\_\_)

In this chapter students will learn how to find the area, surface area and volume of various geometric figures. Sections will explain the formulas to find area, surface area and volume of figures to include cubes, circles, cylinders, prisms, pyramids and others shapes. An entire section explains how to find the area of regular polygons. Lastly, students will learn how to find the area of sectors and arc lengths found in circles.

Section Summary (circle / complete after chapter is finished):

#### 1. Area of Basic Figures

totally understand | kind of understand | not understanding

#### 2. Surface Area of Basic Figures

totally understand | kind of understand | not understanding

#### 3. Volume of Basic Figures

totally understand | kind of understand | not understanding

#### 4. Area of Regular Polygons

totally understand | kind of understand | not understanding

#### 5. Area of Circles/Sectors and Arc Length

totally understand | kind of understand | not understanding