

# CP Geometry

Week of Jan 8-12, 2024

College Prep Class Period 3

## Prior for MIDTERM studying

Q1: Chapter 1 --- Introduction to Geometry notation and basic line & angles.

Chapter 2 --- Proofs

Q2: Chapter 3 --- Parallel lines and angles formed

Chapter 5 --- Congruent Triangles: SSS, SAS, AAS, ASA, or HL w/proofs

## This Week Overview

Mainly Chapter 8

Congruent Polygons versus Similar Polygons

Specializing with Triangles from 3 elements: AA, SSS, & SAS

# Objectives

Textbook sections

Chapter 8 Sections 1 thru 3

## Geometry Lesson 8.1 – Day 1: Similar Polygons

**Essential Question:** How are similar polygons related?

**Lesson Objective(s):** Students will use similarity statements.  
Students will find corresponding lengths in similar polygons.  
Students will find perimeters and areas of similar polygons.  
Students will decide whether polygons are similar.

**Lesson Objective(s):** Students will use the Side-Side-Side Similarity Theorem.  
Students will use the Side-Angle-Side Similarity Theorem.  
Students will prove slope criteria using similar triangles.  
**Previous Learning:** Students have proven triangles similar by using the definition of similarity and by using the Angle-Angle Similarity Theorem.

# Last Week

Student Journal section 5.2      pg 131-132      -- guided notes

Student Journal Notes:      **8.1 pg 220 # 1-6**

8.1 Pg 225      -- guided notes

\*\*\*\*\*

Congruent vs Similar is the difference in finding the sides, not the angles

Congruent = in every way (angles and sides) by orientation

Similar = fractions, proportions, scale factors (new to old)

Perimeter is same scale factor but Area is squared scale factor

# Chapter 8 Section 1: Practice A

To review

ROCK Algebra 2  
2023-2024 Period 2

23 CP Geometry 3  
2022-2023 Period 3 (2 ROCK)

23 Geometry 4  
2023-2024 Period 4

23 Geometry 5  
2023-2024 Period 5

23 Math 7 Strategies 1  
Q2 Period 8

23 Math 7 Strategies 1 Q1  
Q1 Period 8

23 Math 7 Strategies 1 Q3  
Q3 Period 8

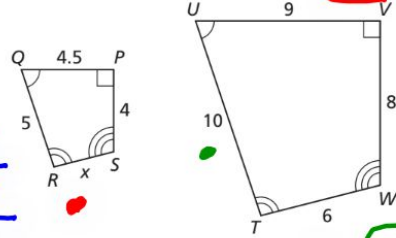
23 Math 7 Strategies 1 Q4  
Q4 Period 8

22-23 Math 8 Strategies 1  
2023 Q4



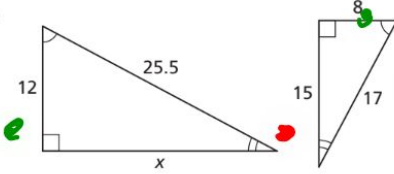
In Exercises 3 and 4, the polygons are similar. Find the value of  $x$ .

3.



$$\frac{x}{6} = \frac{5}{10}$$

4.



$$\frac{x}{15} = \frac{12}{8}$$

Solve

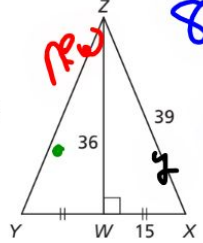
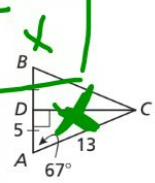
$$8x = 12(15)$$

$$x = 22.5$$

In Exercises 5–11,  $\triangle ABC \sim \triangle XYZ$ .

- Find the scale factor of  $\triangle ABC$  to  $\triangle XYZ$ .
- Find  $m\angle X$ .
- Find  $CD$ .
- Find the area of  $\triangle ABC$ . Then find the area of  $\triangle XYZ$ .
- Find the ratio of the area of  $\triangle ABC$  to the area of  $\triangle XYZ$ .
- Find  $BC$  and  $YZ$ . Explain your reasoning.

$$\frac{15}{5} = 3 = \frac{36}{x}$$



## Last Week

Watch the Edpuzzle on learning about similar polygons.

<https://edpuzzle.com/assignments/657662d331bbc741792d113d/students>

Complete the following online bigideasmath.com 5.2 & 8.1

Complete worksheets 8.1 Practice A & Puzzletime

# MONDAY - Similar Triangles need only 3 elements to check

NOTES: 8.2 Section on proofs for similar triangles by AA

Google Classroom ---

- Watch Edpuzzle Video explaining AA Similarity in Triangles
- Watch BigIdeasMath App Videos example # 1, #3
- Complete online 8.2 Practice
- 

AAA - works only on triangles that all angles match up congruent, then sides in proportion

# TUESDAY - Similar Triangles need only 3 elements to check

Review yesterday NOTES: 8.2 Section on proofs for similar triangles by AA

- AAA - works only on triangles that all angles match up congruent, then sides in proportion

Introduce section 8.3 for 2 more ways.

- SAS - included angle with its 2 sides proportional
- SSS- 3 proportional sides

Use student journal pg 229, 230, 234, 235 for guided notes

Note: If time, review congruence test from last chapter notice congruence is exact copies maybe just flipped, rotated, or turned but no size change. SSS, SAS still a theorem for similarity but now proportions. ASA & AAS are still an option as just AA for similar triangles. HL will still work as it a special SSS.



## Rest of the week:

Wednesday - work on practicing Chapter 8 through online and worksheets.

Thursday - mini quiz on Chapter 8 Similar Polygons and Triangles

Thursday - Midterm review given

Friday - Work on Midterm review also

Monday - NO SCHOOL

TUESDAY - Midterm Part 1 --- multiple choice section

WEDNESDAY - Midterm Part 1 (2nd choice option) and Part 2 ( open response)

Thursday - MAKEUP day and RETEST Chapter 5 if tutored and wish to.

Friday - Q3 starts and may use as a makeup day also.