Lesson	Glossary Terms	Check Your Readiness	Standards		
			Building Toward	Addressing	Building On
Unit 3, Lesson 1	• dilation	• CYR, Item #6	HSG-SRT.A.1.a HSG-SRT.A.1.b HSG-SRT.A.2	HSG-CO.A.2 HSG-SRT.A.1 HSG-SRT.A.1.b	7.G.A.1 8.G.A.3
Unit 3, Lesson 2		• CYR, Item #3	HSG-SRT.A.2	HSG-MG.A.3 HSN-Q.A.1	7.G.A.1
Unit 3, Lesson 3		• CYR, Item #5	HSG-SRT.A.1.b HSG-SRT.A.2	HSG-CO.A.2 HSG-SRT.A.1 HSG-SRT.A.1.b	8.G.A.3 HSG-CO.A.2
Unit 3, Lesson 4			HSG-SRT.A.2 HSG-SRT.A.3	HSG-SRT.A.1 HSG-SRT.A.1.a	HSG-CO.A.2 HSG-CO.C.9
Unit 3, Lesson 5			HSG-CO.C.10	HSG-CO.C.10 HSG-SRT.B.4	HSG-CO.C.10 HSG-SRT.A.1
Unit 3, Lesson 6	• similar	• CYR, Item #7	HSG-SRT.A.2	HSG-SRT.A.1.b HSG-SRT.A.2 HSG-SRT.B.5	HSG-CO.B.6
Unit 3, Lesson 7			HSG-SRT.A.2 HSG-SRT.A.3	HSG-SRT.A.2	HSG-CO.A.2 HSG-SRT.B.4
Unit 3, Lesson 8			HSG-SRT.C.6	HSG-C.A.1 HSG-SRT.A.2	HSG-SRT.A.1
Unit 3, Lesson 9		• CYR, Item #4	HSG-SRT.A.3	HSG-SRT.A.3	HSG-CO.B.8 HSG-CO.C.10 HSG-SRT.A.2
Unit 3, Lesson 10					HSG-CO.B.8
Unit 3, Lesson 11			HSG-SRT.B.4	HSG-SRT.B.4 HSG-SRT.B.5	HSG-SRT.A.3 HSG-SRT.B.4
Unit 3, Lesson 12				HSG-SRT.B.5 HSN-Q.A.1	

Lesson	Glossary Terms	Check Your Readiness	Standards		
			Building Toward	Addressing	Building On
Unit 3, Lesson 13	• altitude (triangles)	• CYR, Item #1 • CYR, Item #2	HSG-SRT.B.4	HSG-SRT.B.5	HSG-SRT.A.3
Unit 3, Lesson 14			HSG-SRT.B.4	HSA-CED.A.4 HSG-SRT.B.4	
Unit 3, Lesson 15				HSG-SRT.B.4	
Unit 3, Lesson 16			HSG-SRT.C.8	HSG-SRT.B.5	8.G.B.7
Unit 3, Lesson 17				HSG-SRT.B.5 HSN-Q.A.3	

Lesson	Instructional Routines	Materials to Gather	Materials to Copy
Unit 3, Lesson 1	• 5 Practices • MLR8: Discussion Supports • Notice and Wonder	• Protractors: Activity 1, Activity 3 • Rulers marked with centimeters: Activity 1, Activity 2, Activity 3 • Geometry toolkits (HS): Activity 2, Activity 3	
Unit 3, Lesson 2	• Aspects of Mathematical Modeling • Extend It • MLR7: Compare and Connect	• Four-function calculators: Lesson, Activity 1, Activity 2, Cool-down • Rulers marked with centimeters: Lesson, Activity 2, Activity 3 • Geometry toolkits (HS): Activity 2, Activity 3 • String: Activity 2 • Tape: Activity 2	
Unit 3, Lesson 3	• MLR1: Stronger and Clearer Each Time • MLR8: Discussion Supports	• Rulers marked with centimeters: Activity 1, Activity 2, Activity 3, Cool-down • Geometry toolkits (HS): Activity 2, Activity 3, Cool-down	
Unit 3, Lesson 4	• MLR1: Stronger and Clearer Each Time	• Geometry toolkits (HS): Activity 1, Activity 2 • Protractors: Activity 1 • Rulers: Activity 2	• Blank Reference Chart (1 copy for every 1 students): Activity 3
Unit 3, Lesson 5	• 5 Practices • MLR2: Collect and Display • Notice and Wonder	• Four-function calculators: Cool-down	
Unit 3, Lesson 6	• Card Sort • MLR1: Stronger and Clearer Each Time • MLR2: Collect and Display	• Rulers: Activity 1, Activity 2 • Geometry toolkits (HS): Activity 2	• Not-So-Rigid Transformations Cards (1 copy for every 2 students): Activity 2

Lesson	Instructional Routines	Materials to Gather	Materials to Copy
Unit 3, Lesson 7	• 5 Practices • Draw It • MLR2: Collect and Display • MLR8: Discussion Supports	• Geometry toolkits (HS): Activity 1, Activity 2, Activity 3 • Protractors: Activity 1, Activity 2 • Rulers: Activity 1, Activity 2 • Math Community Chart: Cool-down	• Invisible Triangles Similarity Cards (1 copy for every 2 students): Activity 3
Unit 3, Lesson 8	• Draw It • MLR7: Compare and Connect	• Scientific calculators: Activity 3	
Unit 3, Lesson 9	• Draw It • Math Talk • MLR5: Co-Craft Questions • MLR8: Discussion Supports	• Geometry toolkits (HS): Activity 2 • Protractors: Activity 2 • Rulers marked with centimeters: Activity 2	
Unit 3, Lesson 10	• Draw It • MLR1: Stronger and Clearer Each Time • MLR8: Discussion Supports		
Unit 3, Lesson 11	• 5 Practices • Draw It • MLR1: Stronger and Clearer Each Time • Notice and Wonder	• Rulers: Activity 2 • Four-function calculators: Activity 3, Cool-down	
Unit 3, Lesson 12	• Card Sort • MLR6: Three Reads • MLR8: Discussion Supports	• Four-function calculators: Activity 1	• Corresponding Parts Cards (1 copy for every 2 students): Activity 2

Lesson	Instructional Routines	Materials to Gather	Materials to Copy
Unit 3, Lesson 13	• 5 Practices • MLR5: Co-Craft Questions	• Four-function calculators: Activity 1, Activity 2, Activity 3, Cool-down • Protractors: Activity 3	
Unit 3, Lesson 14	• MLR1: Stronger and Clearer Each Time • Notice and Wonder		
Unit 3, Lesson 15		• Dynamic geometry software: Activity 1 • Rulers: Activity 1	
Unit 3, Lesson 16	• MLR4: Information Gap Cards • MLR5: Co-Craft Questions • Which Three Go Together?	• Four-function calculators: Activity 2, Activity 3 • Math Community Chart: Activity 2 • Origami paper: Activity 3	• Similar Sequence Cards (1 copy for every 2 students): Activity 2
Unit 3, Lesson 17	• Aspects of Mathematical Modeling • MLR6: Three Reads • Poll the Class	• Geometry toolkits (HS): Activity 2, Activity 4 • Internet-enabled device: Activity 2 • Protractors: Activity 2, Activity 4 • Rulers marked with centimeters: Activity 2 • Measuring tools: Activity 3, Activity 4 • Mirrors: Activity 3 • Straws: Activity 4 • String: Activity 4	• Bounce It In Handout (1 copy for every 4 students): Activity 2

Unit 3, Lesson 1

Scale Drawings

Goals

- Comprehend the terms “scale factor” and “dilation.”
- Critique and create scaled drawings of figures (using words and other representations).

Student Facing Learning Goals

- Let’s make a scale drawing.

Learning Targets

- I can dilate a figure given a scale factor and a center.

Required Preparation

Activity 1:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Lesson:

Students will continue adding to their reference chart in this lesson. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding

Cool Down

Each image shows a dilation of FG using F as the center. Then it is translated up to get the segment $F'G'$. Match the image to the scale factor used for the dilation.

Image 1

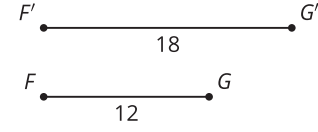


Image 2

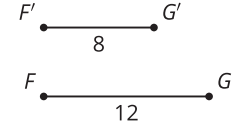


Image 3

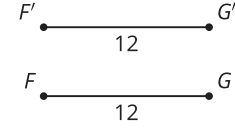


Image 4

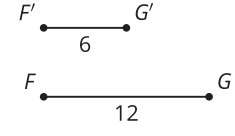
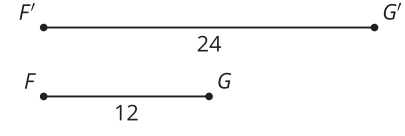


Image 5



A. 1

B. $\frac{3}{2}$

C. 2

D. $\frac{2}{3}$

E. $\frac{1}{2}$

entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 2

Scale of the Solar System

Goals

- Calculate measurements of scaled drawings.
- Create and interpret scaled drawings of figures (using words and other representations).

Student Facing Learning Goals

- Let's dilate figures.

Learning Targets

- I can calculate the lengths of parts of a scaled drawing.

Required Preparation

Activity 2:

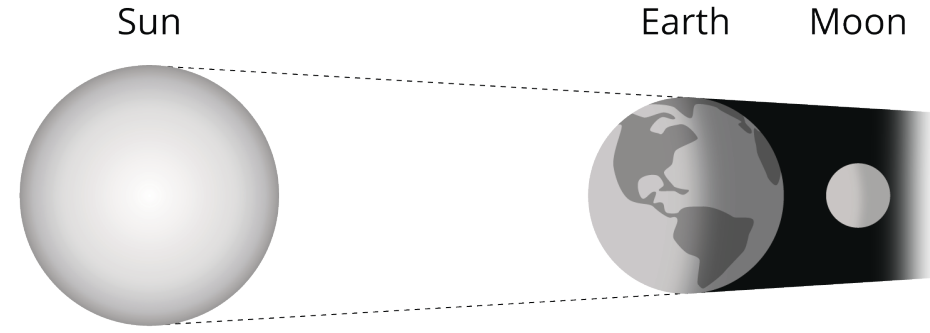
For groups with large planets, prepare 6-inch lengths of string for groups to use as a large-scale compass.

Lesson:

Select a video for the *Lesson Synthesis*, and play it for the class.

Cool Down

NOT TO SCALE



The moon orbits Earth at 384,400 km. The distance from Earth to the sun is 149,600,000 km. The diameter of the sun is 1,391,000 km.

What would the diameter of Earth have to be to appear the same size as the sun from the moon, if the celestial objects are in the order shown here?

Responding to Student Thinking

Points to Emphasize
If most students struggle with using a scale factor and setting up a proportion, focus on this skill as opportunities arise in upcoming lessons. For example, in this activity label the diagrams generated, color code the sides, and use a table or equations to make visible the use of the relationship between the scale factor and side lengths.

Geometry, Unit 3, Lesson 3, Activity 2 All the Scale Factors

Unit 3, Lesson 3

Measuring Dilations

Goals

- Comprehend that corresponding lengths in the original figure and image are in the same proportion.
- Determine that dilating by a scale factor of k multiplies all lengths by k (orally and in writing).

Student Facing Learning Goals

- Let's dilate polygons.

Learning Targets

- I know that when figures are dilated by a scale factor of k, all lengths in the figure are multiplied by k.

Required Preparation

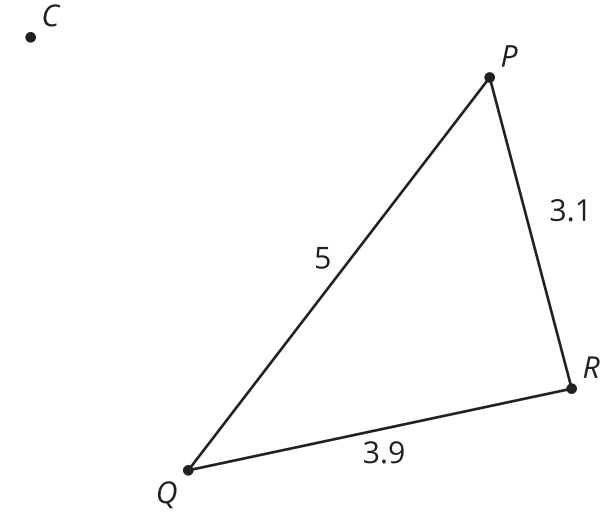
Activity 3:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

Triangle $P'Q'R'$ is a dilation of triangle PQR using center C and a scale factor of 1.5.



1. Is triangle $P'Q'R'$ larger or smaller than triangle PQR? Explain how you know.
2. What is the length of segment $P'Q'$? Explain how you know.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 4

Dilating Lines and Angles

Goals

- Comprehend that dilations take angles to congruent angles.
- Prove that a dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged (orally and in writing).

Student Facing Learning Goals

- Let's dilate lines and angles.

Learning Targets

- I can explain what happens to lines and angles in a dilation.

Required Preparation

Activity 1:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

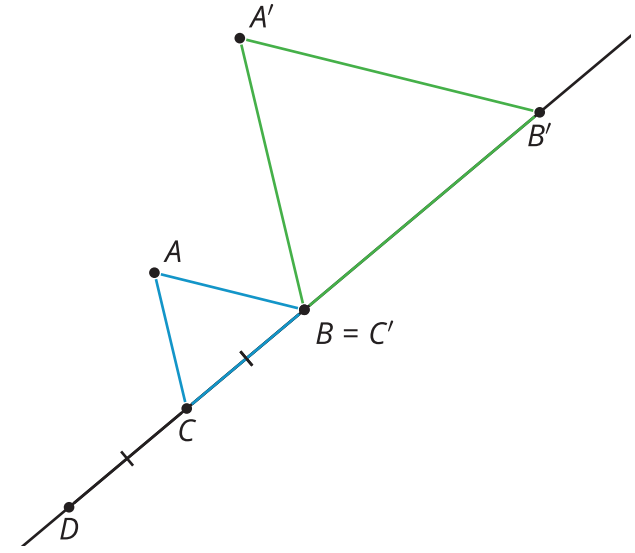
Activity 3:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

Cool Down

Here is the image of triangle ABC and its dilation using center D and a scale factor of 2.

$\overline{DC} \cong \overline{CB}$



1. Why is segment $B'C'$ on the same line as its corresponding side, segment BC?
2. What relationship does angle $A'C'B'$ have with its corresponding angle ACB? Explain or show your reasoning.
3. Explain how you know that segment $A'C'$ is parallel to its corresponding side, segment AC.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Prepare additional copies of the Blank Reference Chart blackline master (double sided, 1 per student). Students can staple the new chart to their full ones, as they will need to continue to refer to the whole packet.

Unit 3, Lesson 5

Splitting Triangle Sides with Dilation (Part 1)

Goals

- Justify that a segment dividing two sides of a triangle proportionally is parallel to the third side.
- Prove that a segment connecting the midpoints of two sides of a triangle is parallel to and half the length of the third side (orally and in writing).

Student Facing Learning Goals

- Let's draw segments connecting midpoints of the sides of triangles.

Learning Targets

- I can explain why the segment connecting the midpoints of two sides of a triangle is parallel to the third side and half the length of the third side.

Required Preparation

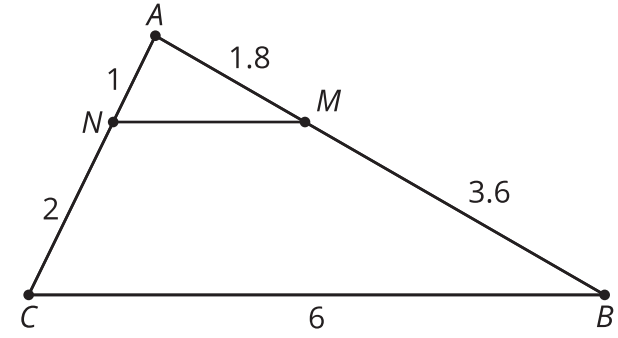
Activity 3:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

What must be true about segment MN?



Responding to Student Thinking

Points to Emphasize
If most students struggle with setting up the correct ratios, focus on this skill as opportunities arise in upcoming lessons. For example, during the *Activity Synthesis* of the activity referred to here, discuss what information we could use to determine that the lines are parallel if it weren't given information.

Geometry, Unit 3, Lesson 11, Activity 1 Notice and Wonder: Parallel Segments

Unit 3, Lesson 6

Connecting Similarity and Transformations

Goals

- Comprehend the definition of similarity in terms of dilations and rigid transformations.
- Generate similarity statements about similar figures, and identify proportional relationships among corresponding side lengths (in writing).

Student Facing Learning Goals

- Let's identify similar figures.

Learning Targets

- I can write similarity statements.
- I know the definition of similarity.

Required Preparation

Activity 3:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

Determine if each statement must be true, could possibly be true, or definitely can't be true. Explain or show your reasoning.

1. Congruent figures are similar.
2. Similar figures are congruent.

Responding to Student Thinking

Points to Emphasize
If most students struggle with the idea that congruent figures are similar figures that have a scale factor of 1, focus on this concept as opportunities arise in upcoming lessons. For example, after students have proven that all circles are similar, ask them whether congruent circles are also similar, and ask them to explain why.

Geometry, Unit 3, Lesson 8, Activity 3 Always? Prove It!

Unit 3, Lesson 7

Reasoning about Similarity with Transformations

Goals

- Explain (in writing) using transformations why similar triangles have all corresponding pairs of angles congruent and all corresponding pairs of sides in proportion.

Student Facing Learning Goals

- Let's describe similar triangles.

Learning Targets

- I know the relationships between corresponding sides and angles in similar triangles.

Required Preparation

Activity 3:

Separate the transformer cards from the triangle cards and give each group one transformer card and one set of three triangle cards. If feasible, provide each group of 2 with a folder or other divider so students can't see each other's desktops.

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

In this lesson you proved that if two triangles have all pairs of corresponding angles congruent and all pairs of corresponding side lengths in the same proportion, then the two triangles are similar.

1. Are you convinced that this is true?
2. How did you show this for all pairs of triangles with these properties?

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 8

Are They All Similar?

Goals

- Critique a proof that uses similarity (in writing).
- Prove theorems about triangles and other figures using similarity.

Student Facing Learning Goals

- Let's prove that figures are similar.

Learning Targets

- I can critique proofs that use similarity.
- I can write proofs using the definition of similarity.

Required Preparation

Activity 3:

The scientific calculators are for use in the extension problem.

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

Noah has a conjecture about rhombi with certain properties always being similar.

1. What would you need to do to show that the conjecture is incorrect?
2. What would you need to do to show that the conjecture is true?

Responding to Student Thinking

Press Pause
By this point in the unit, there should be some student mastery of sufficient and necessary conditions for similarity. If most students struggle, make time to revisit related work in the practice problems referred to here.

Geometry, Unit 3, Lesson 8, Practice Problem 3
Geometry, Unit 3, Lesson 17, Practice Problem 9

Unit 3, Lesson 9

Conditions for Triangle Similarity

Goals

- Prove the Angle-Angle Triangle Similarity Theorem (in writing).

Student Facing Learning Goals

- Let's prove that some triangles are similar.

Learning Targets

- I can explain why the Angle-Angle Triangle Similarity Theorem works.

Required Preparation

Activity 2:

Students will continue adding to their reference chart in this activity. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

Priya noticed in the last activity that between the 2 triangles, you need to know only 4 angles to show that they are similar. She wondered which fourth angle would work to prove that triangle RST is similar to triangle EFG.

In triangle RST:

- Angle R is 90°
- Angle S is 25°
- Angle T is x°

In triangle EFG:

- Angle E is 90°
- Angle F is y°
- Angle G is z°

Draw a sketch of the triangles. Give an example of a value for one of x, y, or z that would guarantee that triangle RST is similar to triangle EFG. Explain your reasoning.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 10

Other Conditions for Triangle Similarity

Goals

- Prove the Side-Angle-Side and Side-Side-Side Triangle Similarity Theorems (in writing).

Student Facing Learning Goals

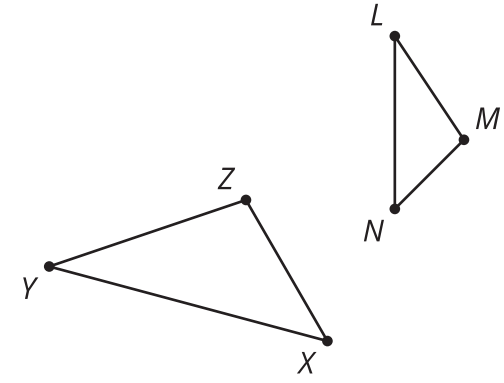
- Let's prove that more triangles are similar.

Learning Targets

- I can explain why the Side-Angle-Side and Side-Side-Side Triangle Similarity Theorems work.

Cool Down

Invent measurements that would show that triangle XYZ is similar to triangle NLM, using the Side-Angle-Side Triangle Similarity Theorem.



Responding to Student Thinking

Points to Emphasize
If most students struggle with re-orienting given diagrams and identifying corresponding side lengths, focus on this skill as opportunities arise in upcoming lessons. For example, in this activity, invite students to share how they figured out which parts of the triangles are corresponding.

Geometry, Unit 3, Lesson 12, Activity 2 Card Sort: Corresponding Parts

Unit 3, Lesson 11

Splitting Triangle Sides with Dilation (Part 2)

Goals

- Prove that a segment parallel to one side of a triangle divides the other sides proportionally (in writing).

Student Facing Learning Goals

- Let's investigate parallel segments in triangles.

Learning Targets

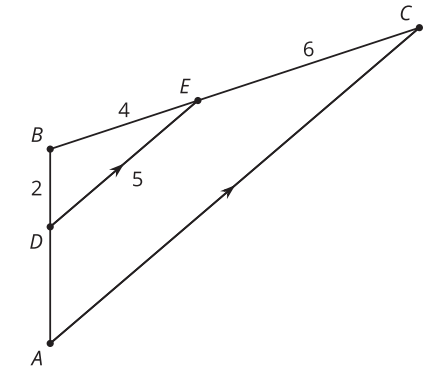
- I can explain why a segment parallel to one side of a triangle divides the other sides proportionally.

Cool Down

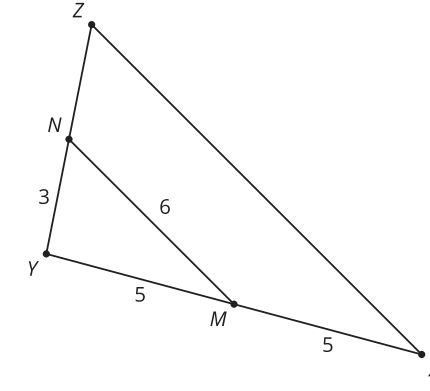
For each image, determine if you have enough information to find the missing lengths. If so, find them. If not, explain why.

1. DE is parallel to AC.
   - $AD =$
   - $AC =$

$\overline{DE} \parallel \overline{AC}$



2. MN is 6 units.
   - $NZ =$
   - $XZ =$



Responding to Student Thinking

Press Pause
By this point in the unit, there should be some student mastery of working with proportional relationships in triangles split by a line parallel to one side. If most students struggle, make time to revisit related work in the lessons referred to here. See the Course Guide for ideas to help students re-engage with earlier work.

Geometry, Unit 3, Lesson 5 Splitting Triangle Sides with Dilation (Part 1)
Geometry, Unit 3, Lesson 4 Dilating Lines and Angles

Unit 3, Lesson 12

Practice with Proportional Relationships

Goals

- Calculate unknown values in proportional relationships.
- Determine scale factors to describe similar figures (using words and other representations).

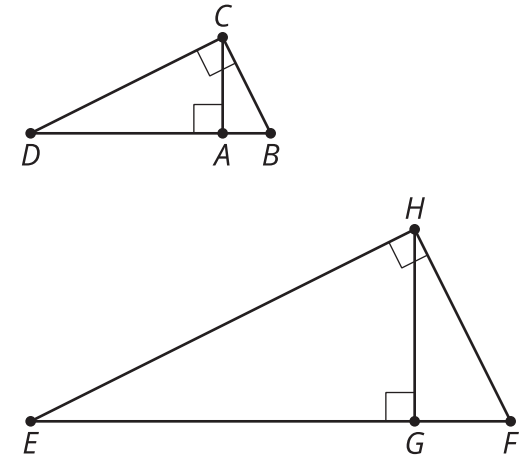
Student Facing Learning Goals

- Let's find unknown values in proportional relationships.

Learning Targets

- I can find scale factors and use them to solve problems.

Cool Down



Triangle BCD is similar to triangle FHE. Write at least 3 equivalent ratios based on the diagram.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 13

Using the Pythagorean Theorem and Similarity

Goals

- Justify that the two smaller right triangles formed when a right triangle has an altitude drawn to its hypotenuse are similar to the original right triangle (in writing).

Student Facing Learning Goals

- Let's explore right triangles with altitudes drawn to the hypotenuse.

Learning Targets

- I can find similar triangles formed by the altitude to the hypotenuse in a right triangle.

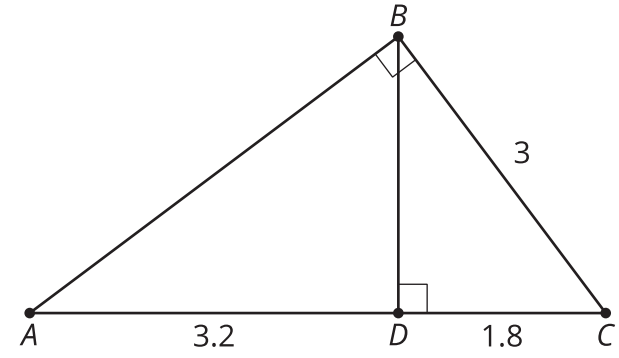
Required Preparation

Activity 3:

Ensure that geometry toolkits are well stocked with tracing paper.

Cool Down

Find the lengths of segments AB and BD. Then check your answers using a different method.



Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 14

Proving the Pythagorean Theorem

Goals

- Prove the Pythagorean Theorem (using words and other representations).

Student Facing Learning Goals

- Let's prove the Pythagorean Theorem.

Learning Targets

- I can prove the Pythagorean Theorem.

Required Preparation

Lesson:

Students will continue adding to their reference chart in this lesson. Be prepared to add to the class display. The Blank Reference Chart for students and a teacher copy of a completed version are available in the blackline masters for the unit.

If there are multiple sections of this course in the same classroom, consider hiding entries on the class reference chart and revealing them at the appropriate time rather than making multiple displays.

Cool Down

1. Which proof of the Pythagorean Theorem makes more sense to you?
2. Draw a picture that helps show why the Pythagorean Theorem must be true.

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 15

Converse of the Pythagorean Theorem

Goals

- Determine (in writing and other representations) possible lengths for the third side of a triangle when given the lengths of the two other sides.
- Identify (orally and in writing) triangles as acute, right, or obtuse based on the side lengths.

Student Facing Learning Goals

Let's look at the converse of the Pythagorean Theorem.

Learning Targets

- I can decide whether a triangle is acute, right, or obtuse based on the side lengths.
- I can find possible side lengths for a triangle when I know the lengths of two sides.

Required Preparation

Activity 1:

For the digital version of the activity, acquire devices that can run the applet.

Cool Down

A triangle has sides of length 5, 12, and x.

1. Complete the inequality so that it describes possible lengths for x in this triangle.

   $_____ < x < _____$

2. What value of the third side would make it the hypotenuse of a right triangle?

Responding to Student Thinking

More Chances
Students will have more opportunities to understand the mathematical ideas addressed here. There is no need to slow down or add additional work to the next lessons.

Unit 3, Lesson 16

Finding All the Unknown Values in Triangles

Goals

- Use similarity, proportionality, and the Pythagorean Theorem to solve problems involving right triangles (using words and other representations).

Student Facing Learning Goals

- Let's find all the unknown values in right triangles.

Learning Targets

- I can solve problems involving similar right triangles.

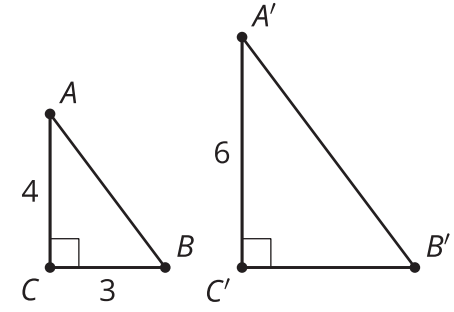
Required Preparation

Activity 3:

The origami paper is for use in the extension problem.

Cool Down

Triangle ABC is similar to triangle $A'B'C'$. Calculate the length of side $A'B'$. Then check your answer using a different method.



Responding to Student Thinking

Points to Emphasize

If most students struggle with recognizing the need to use the Pythagorean Theorem, focus on this skill as opportunities arise in upcoming lessons. For example, in this activity ask students to find the total length of the laser beam.

Geometry, Unit 3, Lesson 17, Activity 1 Where Does It Point?

Unit 3, Lesson 17

Reflection Similarity

Goals

- Use similarity and proportional reasoning to solve problems in context and interpret the results (using words and other representations).

Student Facing Learning Goals

- Let's use similarity to solve problems.

Learning Targets

- I can solve and interpret problems involving similar right triangles.

Required Preparation

Activity 2:

Devices that can run the applet are required for the digital version of the activity.

Activity 3:

Determine a location for the experiment where you can place the mirrors so students will be able to see the top of the object being measured and the Sun won't be too bright on the mirrors. If mirrors are not available, shallow bowls of water, especially dark bowls or bowls with dark paper at the bottom work well.