

Today's Materials



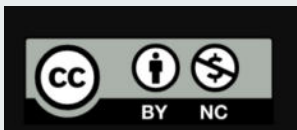
- device
- pencil
- notebook
- glue



Corresponding Parts and Scale Factors

Lesson 2

CCSS Standards: Building on	• 5.NBT.B.7 • 5.NF.B.4
CCSS Standards: Addressing	• 7.G.A.1
CCSS Standards: Building towards	• 7.RP.A.2





Number Talk: Multiplying by 10

Warm Up 2.1

- Number Talk

- One problem will be displayed at a time.
- Give me the signal as you think of answers and strategies.
- We will share out as many strategies as we can!





Find each product mentally.

$$\frac{1}{4} \cdot 32$$

$$(7.2) \cdot \frac{1}{9}$$

$$\frac{1}{4} \cdot (5.6)$$

Let's describe
features of
scaled copies!



Corresponding Parts

Activity 2.2

- Notice and Wonder

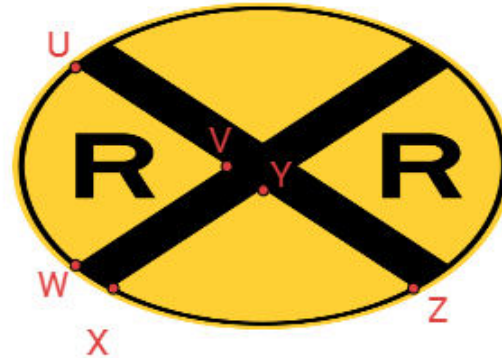
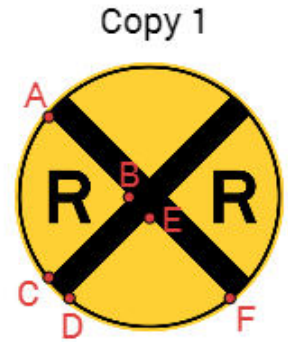
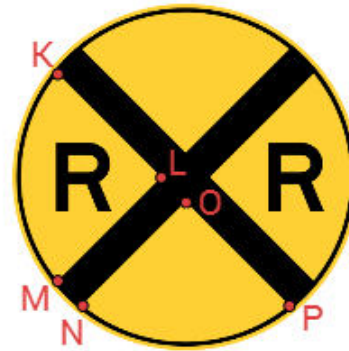


**In this lesson,
we will look more closely at
copies of figures and describe
specific parts in them.**

What do you notice?
What do you wonder?

Corresponding Parts:

- The X-pattern going across each figure
- The curved outline of each figure
- The points **K** in the original sign, **A** in Copy 1, and **U** in Copy 2



Copy 2



Today, we'll investigate

→ Unit 1: Scale Drawings

→ Lesson 2: Corresponding Parts and Scale Factors

OPEN-UP resources **GRADE 7 MATHEMATICS**
By Illustrative Mathematics®



UNIT 1
Scale Drawings



UNIT 2
Introducing Proportional Relationships



UNIT 3
Measuring Circles

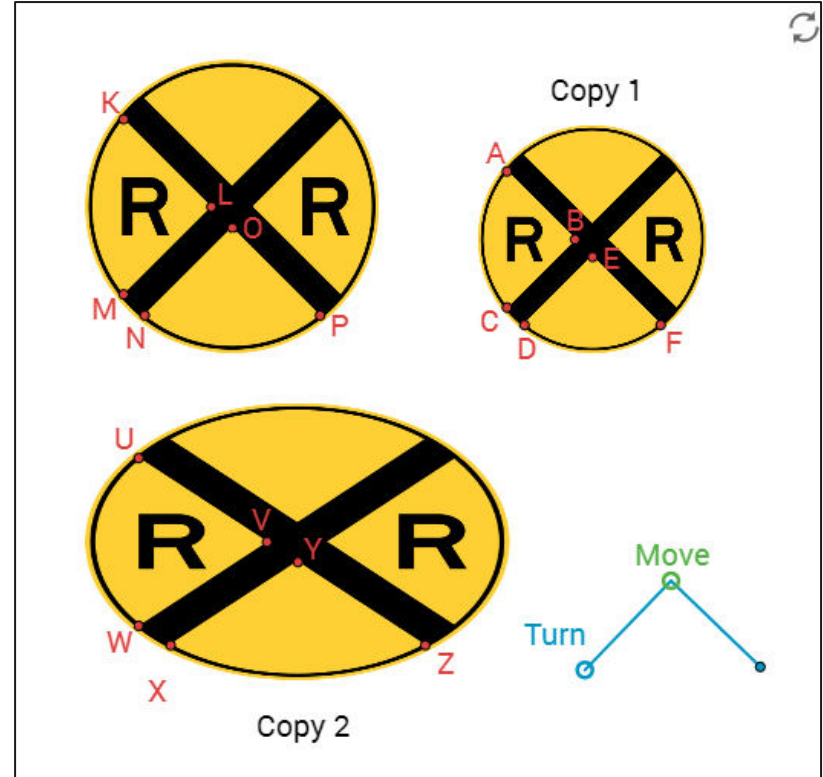
LESSON 1 What are Scaled Copies?	LESSON 2 Corresponding Parts and Scale Factors	LESSON 3 Making Scaled Copies	LESSON 4 Scaled Relationships	LESSON 5 The Size of the Scale Factor
LESSON 6 Scaling and Area	LESSON 7 Scale Drawings	LESSON 8 Scale Drawings and Maps	LESSON 9 Creating Scale Drawings	LESSON 10 Changing Scales in Scale Drawings
LESSON 11 Scales without Units	LESSON 12 Units in Scale Drawings	LESSON 13 Draw It to Scale	PRACTICE PROBLEMS	GLOSSARY

One road sign for railroad crossings is a large X in the middle and 2 R's.

Here is a picture with some points labeled and two copies of the picture.

Use Quiet Think Time
(3 min.) to complete
Questions 1-2.

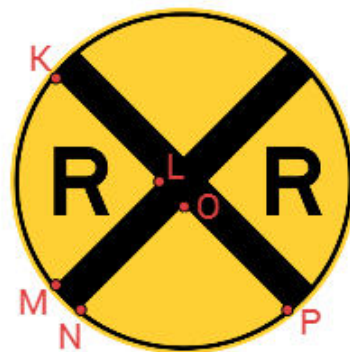
Share your thoughts
with your team!



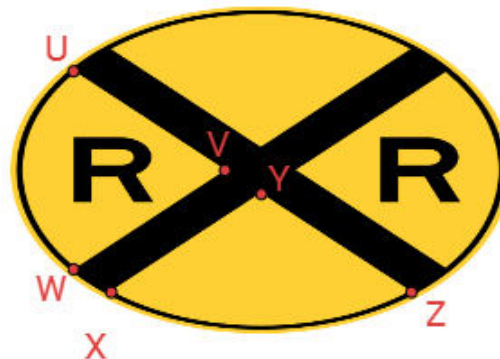
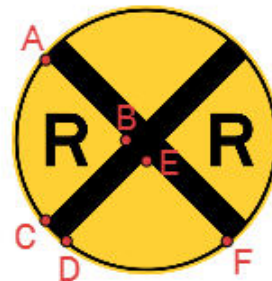
Name a set of corresponding points, segments, or angles.

Is either copy a scaled copy of the original sign?

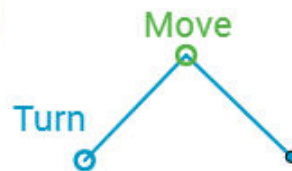
Complete
Questions 3 & 4 on
your own.



Copy 1



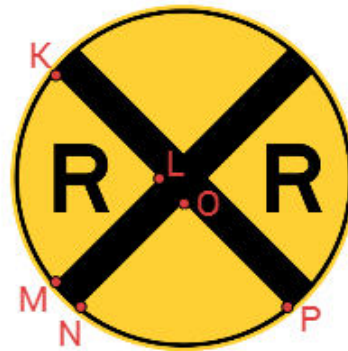
Copy 2



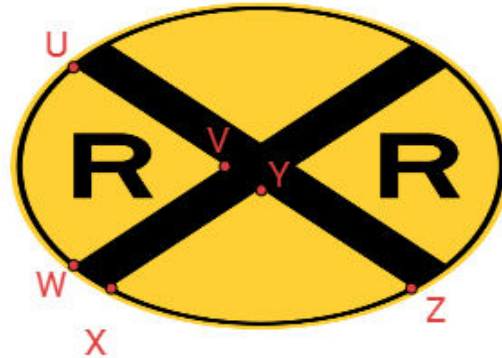


In the scaled copy, Copy 1, did the size of any angle change compared to its corresponding angle in the original sign?

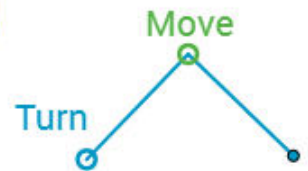
In Copy 2, did the size of angle change? Which ones?



Copy 1

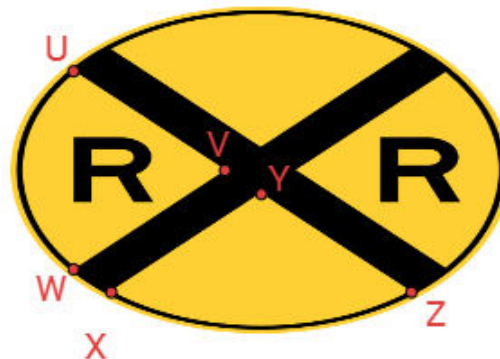
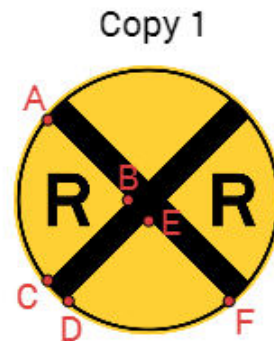
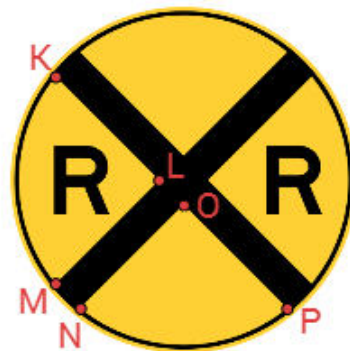


Copy 2



What can you say about the corresponding angles in 2 figures that are scaled copies?

What can you say about corresponding angles in 2 figures that are **not** scaled copies?



Scaled Triangles

Activity 2.3

Think Pair Share



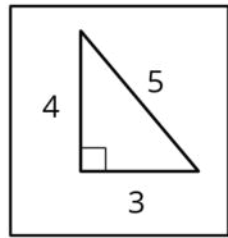


Each team member will be given two triangles to look at.

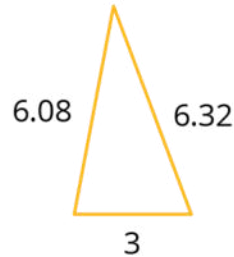
- A and E
- B and F
- C and G
- D and H

Work on your own to determine if your triangles are scaled copies of the original triangle. (2 min.)

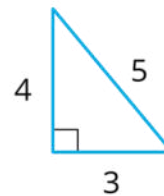
O



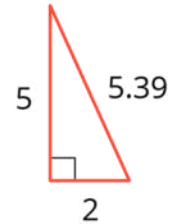
A



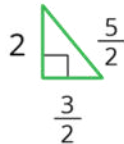
B



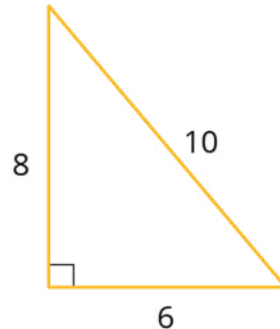
C



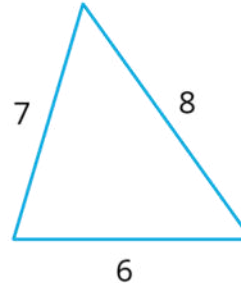
D



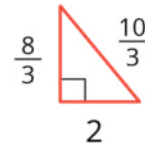
E



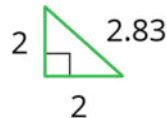
F



G

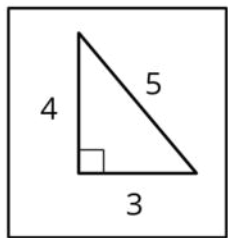


H

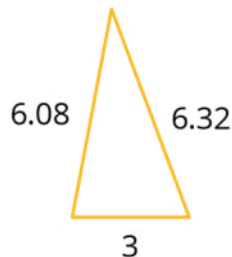


How were you able to tell right away that some figures are not scaled copies?

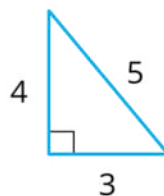
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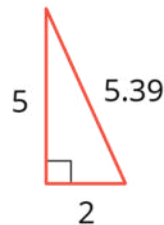
A



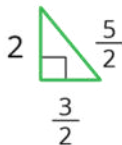
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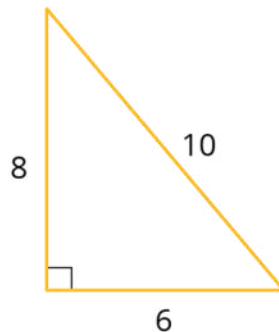
C



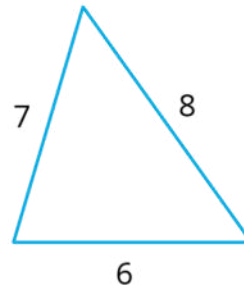
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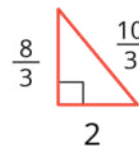
E



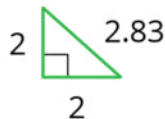
F



G



H

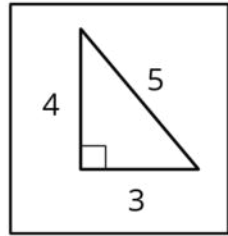


Complete the rest of the questions!

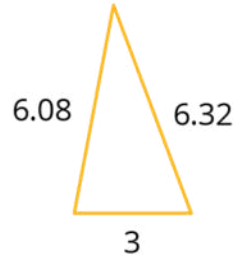
Remember: A, C, F, and H are not scaled copies!

How did you know which sides of the triangle correspond?

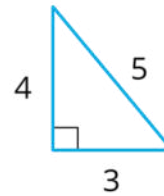
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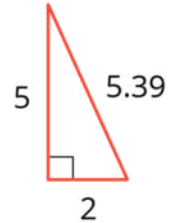
A



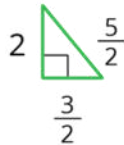
B



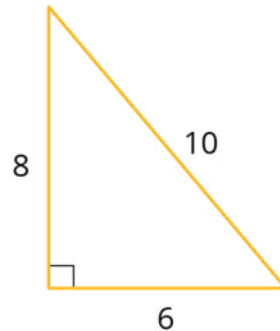
C



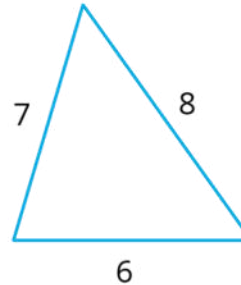
D



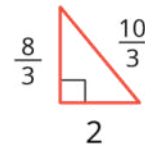
E



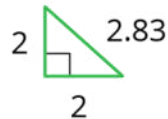
F



G



H



How was each copy scaled from the original?



triangle O	3	4	5
triangle B	3	4	5
triangle D	$\frac{3}{2}$	2	$\frac{5}{2}$
triangle E	6	8	10
triangle G	2	$\frac{8}{3}$	$\frac{10}{3}$

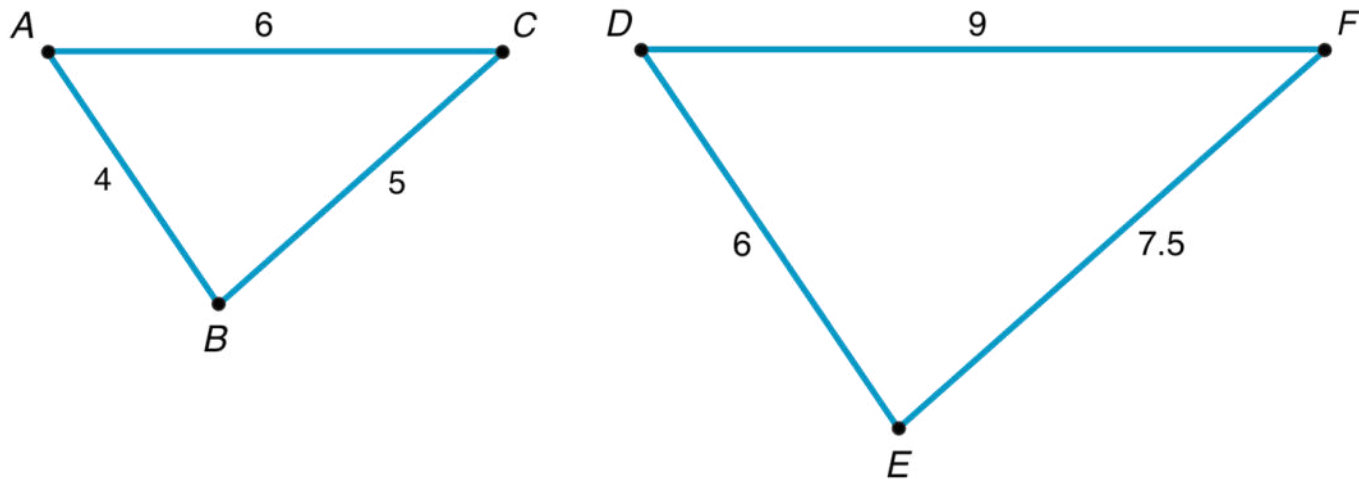


Are you ready for more?

Choose one of the triangles that is not a scaled copy of Triangle O.

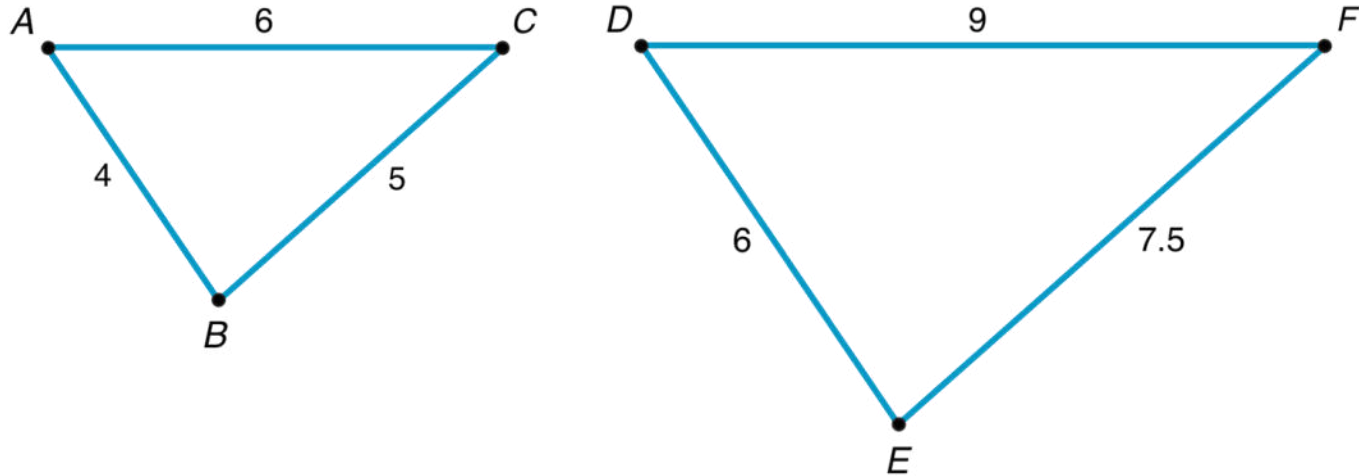
Describe how you could change at least one side to make a scaled copy, while leaving at least one side unchanged.

What do we mean by corresponding parts?



What is a scale factor?

How does it work?



Today's Goals

- ❑ I can describe what the scale factor has to do with a figure and its scaled copy.
- ❑ In a pair of figures, I can identify:
 - ❑ corresponding points
 - ❑ corresponding segments
 - ❑ corresponding angles



Comparing Polygons *ABCD* and *PQRS*

Cool Down



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