

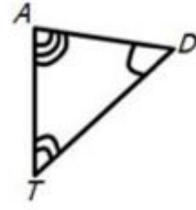
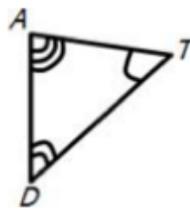
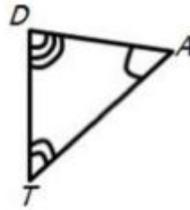
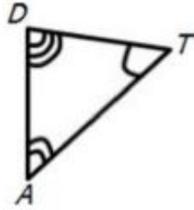
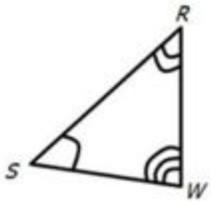
# Similar Figures

## Week 1 (4/20 - 4/24):

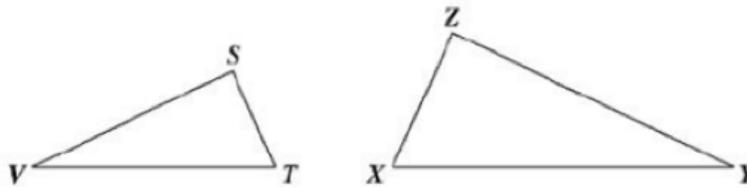
**Topic:** Identify corresponding sides and corresponding congruent angles of similar quadrilaterals and triangles.

1. Look at  $\triangle SRW$ .

If  $\triangle SRW \sim \triangle TDA$ , circle the image that correctly labels  $\triangle TDA$ ?



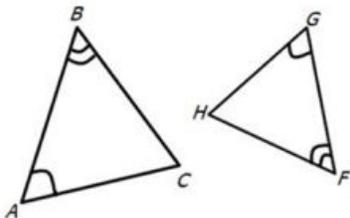
2. Triangle STV and triangle ZXY are similar. Highlight ALL pairs of segments that are corresponding sides of these triangles.



$\overline{ST}$ and $\overline{ZX}$	$\overline{TV}$ and $\overline{XY}$	$\overline{VT}$ and $\overline{ZX}$	$\overline{TV}$ and $\overline{XZ}$	$\overline{XY}$ and $\overline{SV}$	$\overline{SV}$ and $\overline{ZY}$
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**Topic:** Given two similar quadrilaterals or triangles, write similarity statements using symbols.

3.

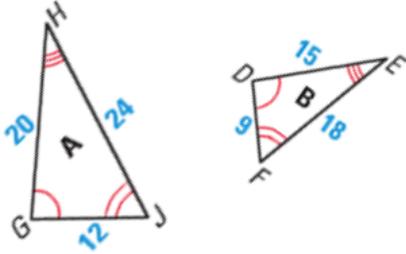


$\triangle BAC \sim \triangle$  \_\_\_\_\_

4.

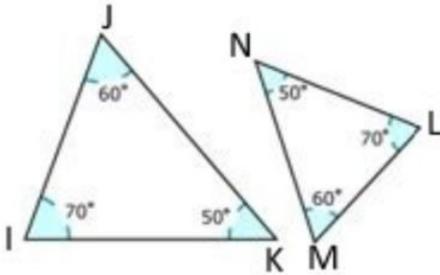
If  $\triangle ABC$  is similar to  $\triangle DFE$ , which angle of  $\triangle DFE$  corresponds to  $\angle B$ ? \_\_\_\_\_

5. Complete the table using the pair of similar figures.



Corresponding Sides	Ratio	Scale Factor
$\overline{GH} \sim$ _____		
$\overline{FD} \sim$ _____		
$\overline{JH} \sim$ _____		

6. Identify the corresponding angles and their measurement using the similar figures below.

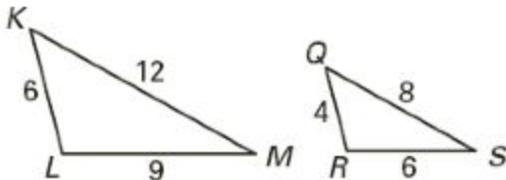


Corresponding Angles	Angle Measurement
$\angle J =$ _____	
_____ = $\angle L$	
$\angle K =$ _____	

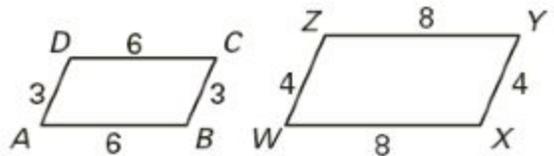
**Topic: Write proportions to express the relationships between the lengths of corresponding sides of similar quadrilaterals and triangles.**

Sketch a double number line to include the ratios of all corresponding sides. Lastly, calculate the scale factor for each pair of similar figures.

7.



8.



Scale Factor: \_\_\_\_\_

Scale Factor: \_\_\_\_\_

9. The following is true about similar figures DOT and ANG.

$$\frac{DO}{AN} = \frac{OT}{NG} = \frac{DT}{AG} = \frac{3}{1}$$

Which could be the length of  $\overline{DT}$  and  $\overline{AG}$ ?

A)  $DT = 6$  and  $AG = 2$

B)  $DT = 9$  and  $AG = 6$

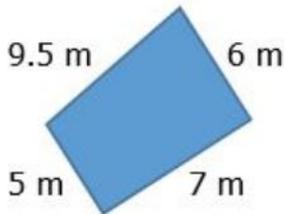
C)  $DT = 6$  and  $AG = 4$

D)  $DT = 9$  and  $AG = 4$

10.

Look at the quadrilateral.

Which shape is similar?



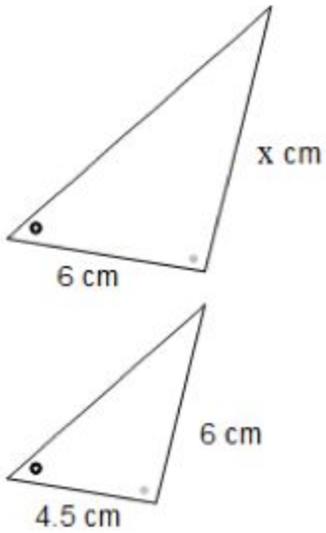
<p>A blue quadrilateral with side lengths 19 m, 14 m, 12 m, and 10 m. The sides are arranged such that 19 m and 14 m are the top two sides, 10 m and 12 m are the bottom two sides, and the quadrilateral is tilted clockwise.</p>	<p>A blue quadrilateral with side lengths 20 m, 12 m, 14 m, and 10 m. The sides are arranged such that 20 m and 12 m are the top two sides, 10 m and 14 m are the bottom two sides, and the quadrilateral is tilted clockwise.</p>
<p>A blue quadrilateral with side lengths 4.75 m, 3 m, 3.5 m, and 2.5 m. The sides are arranged such that 4.75 m and 3 m are the top two sides, 2.5 m and 3.5 m are the bottom two sides, and the quadrilateral is tilted clockwise.</p>	<p>A blue quadrilateral with side lengths 11.5 m, 8 m, 9 m, and 7 m. The sides are arranged such that 11.5 m and 8 m are the top two sides, 7 m and 9 m are the bottom two sides, and the quadrilateral is tilted clockwise.</p>

**Week 2 (4/27 - 5/1):**

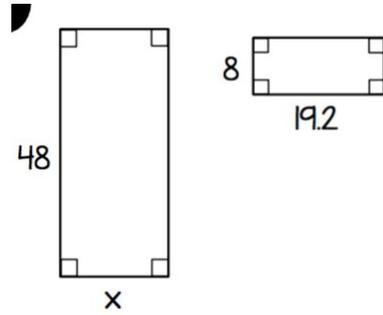
**Topic: Solve a proportion to determine a missing side length of similar quadrilaterals or triangles.**

Solve for the missing side.

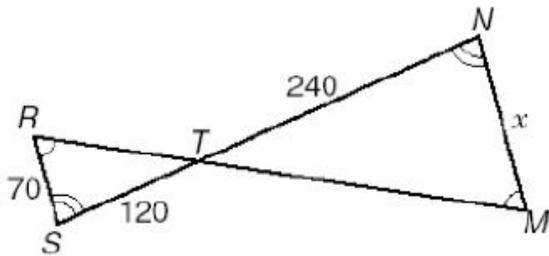
1.



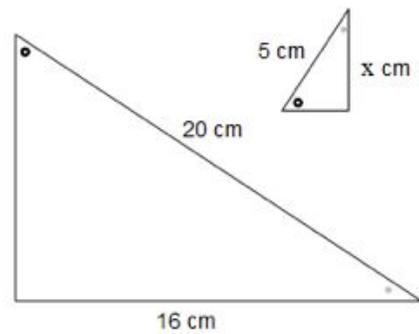
2.



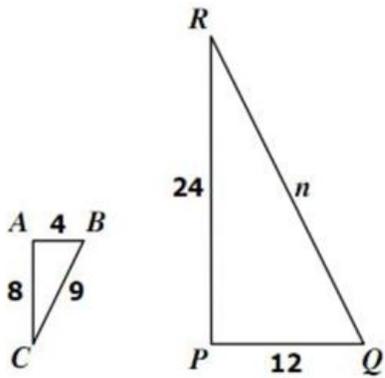
3.



4.



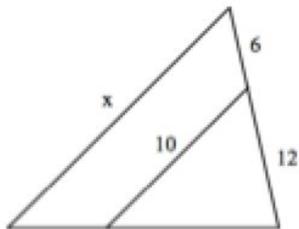
5. Triangle ABC is similar to triangle PQR. Which proportion can be used to find  $n$ ?



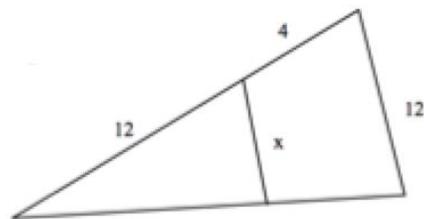
A) $\frac{8}{12} = \frac{n}{9}$	C) $\frac{4}{9} = \frac{12}{n}$
B) $\frac{8}{9} = \frac{n}{12}$	D) $\frac{4}{8} = \frac{12}{n}$

Directions: Solve for the missing side. HINT: Be sure to redraw the overlapping triangles separately.

6.

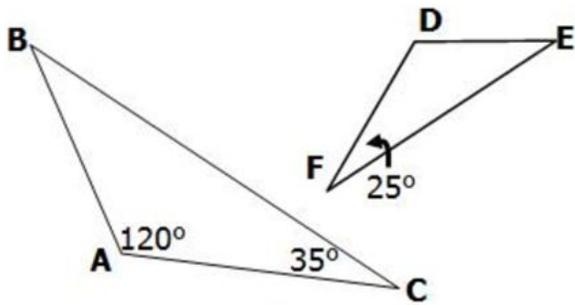


7.



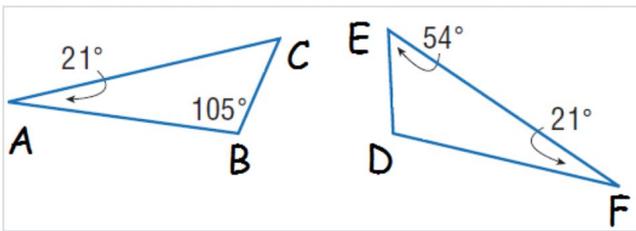
**Topic: Given angle measures in a quadrilateral or triangle, determine unknown angle measures in a similar quadrilateral or triangle.**

8. If the two triangles shown are similar, which statement is true?



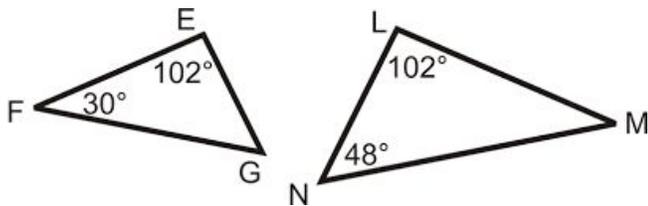
- A)  $\triangle ABC \sim \triangle DFE$
- B)  $\triangle ABC \sim \triangle DEF$
- C)  $\triangle DFE \sim \triangle ACB$
- D)  $\triangle DEF \sim \triangle CBA$

9.



Corresponding Angles	Angle Measurement
$\angle A =$ _____	
_____ = $\angle D$	
$\angle C =$ _____	

10.

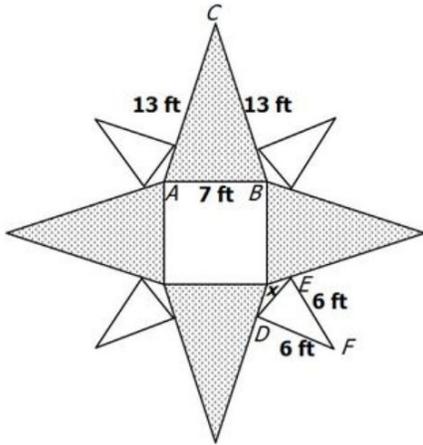


Corresponding Angles	Angle Measurement
$\angle L =$ _____	
_____ = $\angle F$	
$\angle N =$ _____	

**Challenges:**

**Choose TWO of the challenges to complete!!**

Option 1: William is building a decorative star with similar wooden triangles. Triangle ABC is similar to triangle EDF. Which proportion can be used to find  $x$ ?



$\frac{7 \text{ ft}}{x} = \frac{13 \text{ ft}}{6 \text{ ft}}$	$\frac{7 \text{ ft}}{x} = \frac{6 \text{ ft}}{13 \text{ ft}}$
$\frac{x}{7 \text{ ft}} = \frac{13 \text{ ft}}{6 \text{ ft}}$	$\frac{7 \text{ ft}}{13 \text{ ft}} = \frac{6 \text{ ft}}{x}$

Option 2: Create your own design using similar triangles and/or quadrilaterals. Be sure to include side measurements on your design.

Option 3: **Identify** and **describe** how similar figures are used in a career today. *Your response **must be at least 5 sentences long.***