

# Chapter 7 Study Guide

## Geometry



Name: \_\_\_\_\_

**Target 7.1: Determine if polygons are similar and write a similarity statement.**

Self-Assess: 1 (Uh Oh)

2

3 (I am okay)

4

5 (I got this!!!!)

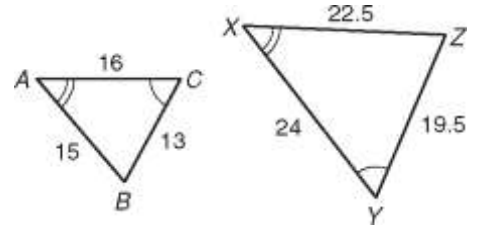
1) Two polygons are similar only if the:

corresponding angles are \_\_\_\_\_ and their corresponding sides are \_\_\_\_\_.

2) Give the similarity ratio and write a similarity statement.

Ratio: \_\_\_\_\_

Similarity Statement: \_\_\_\_\_



**Target 7.2: Draw and describe a dilation.**

Self-Assess: 1 (Uh Oh)

2

3 (I am okay)

4

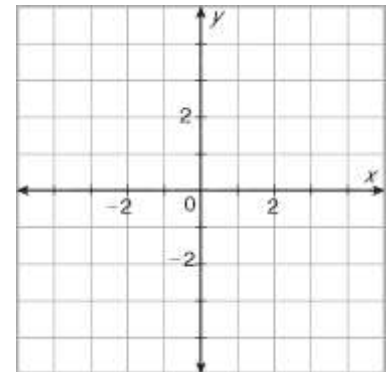
5 (I got this!!!!)

3) Step 1: Plot  $\triangle ABC$ :  $A(2, 4)$ ,  $B(-2, 0)$ ,  $C(-1, -3)$

Step 2: Apply the dilation from  $(0, 0)$  and plot the new vertices.

$$D: (x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$$

Step 3: Is it a reduction/enlargement?  
Explain your answer.

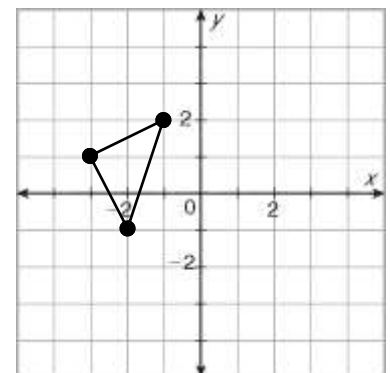


4) Step 1: Plot  $\triangle ABC$ :  $A(-3, 1)$ ,  $B(-2, -1)$ ,  $C(-1, 2)$

Step 2: Apply the dilation from  $(-4, 1)$  and plot the new vertices.

$$D: (x, y) \rightarrow (2x, 2y)$$

Step 3: Is it a reduction/enlargement?  
Explain your answer.



**Target 7.3: Identify the postulate used to show triangles are similar and write a similarity statement.**

Self-Assess: 1 (Uh oh)

2

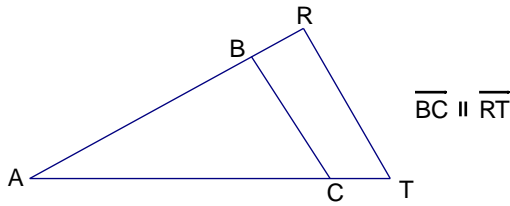
3 (I am okay)

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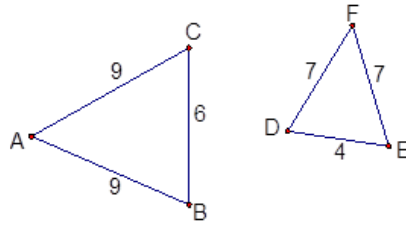
5 (I got this!!!)

**SHOW YOUR WORK TO PROVE WHY THE TRIANGLES ARE (OR ARE NOT) SIMILAR!!!**

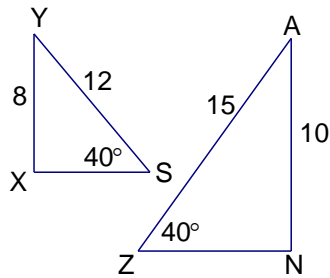
5)  $\triangle ABC \sim \triangle$  \_\_\_\_\_ by \_\_\_\_\_



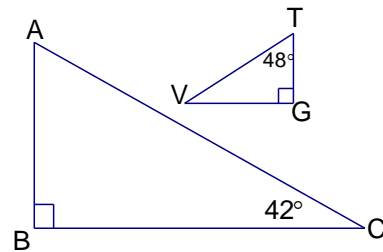
6)  $\triangle ABC \sim \triangle$  \_\_\_\_\_ by \_\_\_\_\_



7)  $\triangle YXS \sim \triangle$  \_\_\_\_\_ by \_\_\_\_\_



8)  $\triangle ABC \sim \triangle$  \_\_\_\_\_ by \_\_\_\_\_



**Target 7.3: Find side lengths of similar triangles.**

Self-Assess: 1 (Uh oh)

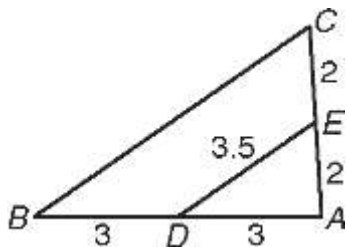
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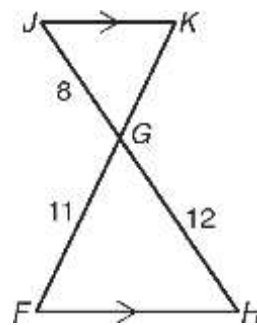
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5 (I got this!!!)

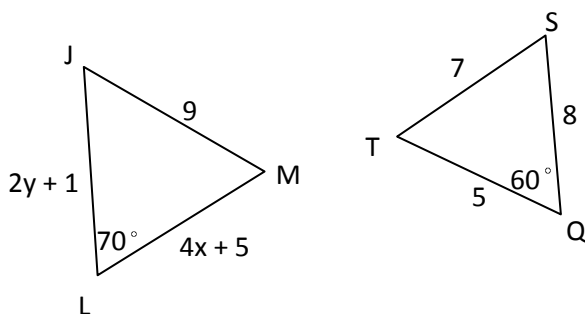
9) Find BC given that  $\triangle EAD \sim \triangle CAB$ .



10) Why are the triangles similar? Find GK.



11) If  $\triangle JLM \sim \triangle QST$  find x and y.



**Target 7.4.a: Use the Triangle Proportionality Theorem to find lengths of segments.**

Self-Assess: 1(Uh oh)

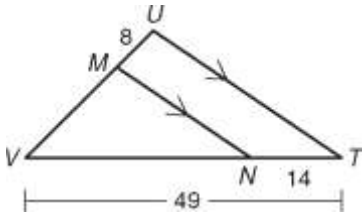
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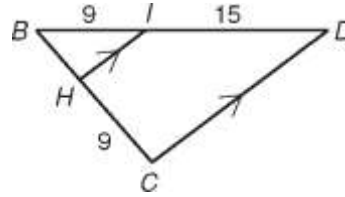
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5(I got this!!!)

12) Find the length of segment MV:



13) Find the length of segment BH.



**Target 7.4.b: Use the Two Transversal Proportionality Corollary to find lengths of segments.**

Self-Assess: 1(Uh oh)

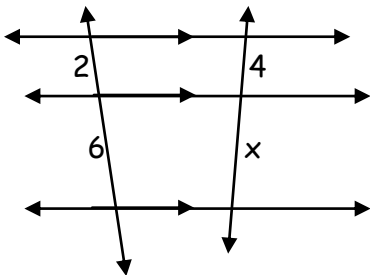
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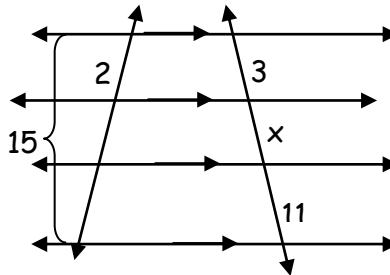
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5(I got this!!!)

14) Find x.



15) Find x.



**Target 7.4.c: Use the Angle Bisector Theorem to find lengths of segments.**

Self-Assess: 1(Uh oh)

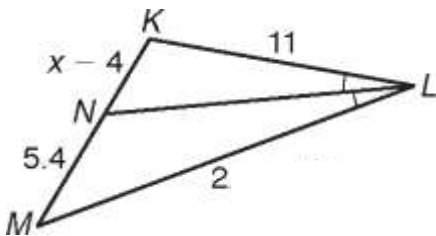
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3(I am okay)

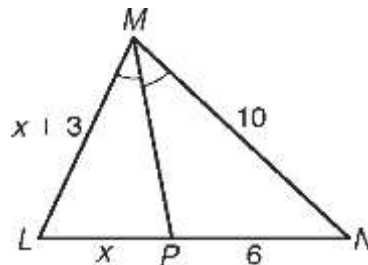
4

5(I got this!!!)

16) Find x.



17) Find LP and LM.



Target 7.5.a: Use ratios to make indirect measurements.

Self-Assess: 1 (Uh oh)                      2                      3 (I am okay)                      4                      5 (I got this!!!)

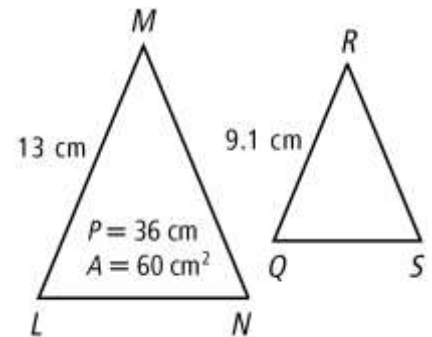
18) John, who is 5 ft. 9 in. tall, wanted to know the height of the MacDonald's sign. At the same time of day, he measured his shadow and the sign's shadow. He found that his shadow was 7 ft. 8 in. and the the sign's shadow was 38 ft. 4 in. shadow. What is the height of the sign in inches? In feet?

19) Lady Liberty holds a tablet in her left hand. The tablet is 7.19 m long and 4.14 m wide. If you made a scale drawing using the scale 1 cm : 0.75 m, what would be the dimensions of the length and the width to the nearest tenth? (*Hint: you need to set up two proportions*)

Target 7.5.b: Find measurements of similar polygons.

Self-Assess: 1 (Uh oh)                      2                      3 (I am okay)                      4                      5 (I got this!!!)

20) Given that  $\triangle LMN \sim \triangle QRS$ , find the perimeter and area of  $\triangle QRS$ .



21) Given that  $\triangle LKM \sim \triangle NKP$ , find the coordinates of  $P$  and the scale factor.

