Chapter 7 Study Guide

Geometry

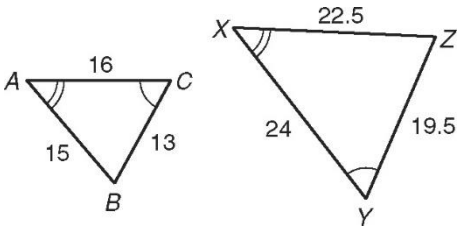
Name: _____

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: _____

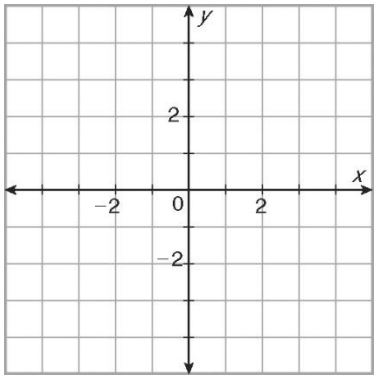
Target 7.2: Draw and describe a dilation.				
Self-Assess: 1 (Uh Oh)	2	3 (I am okay)	4	5 (I got this!!!!)

3) Step 1: Plot △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) → (½x, ½y)

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

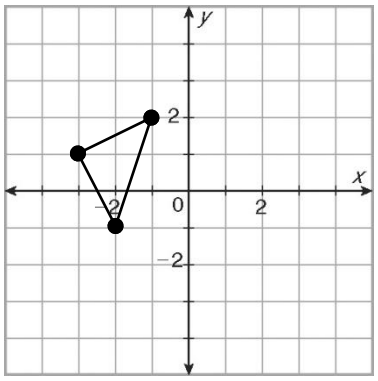


4) Step 1: Plot △ABC: A(-3, 1), B(-2, -1), C(-1, 2)

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

D: (x, y) → (2x, 2y)

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

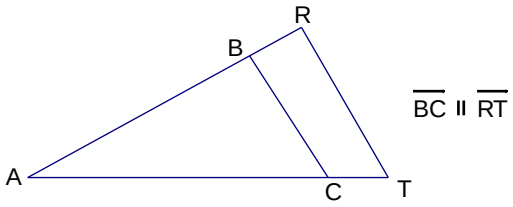


Target 7.3: Identify the postulate used to show triangles are similar and write a similarity statement.

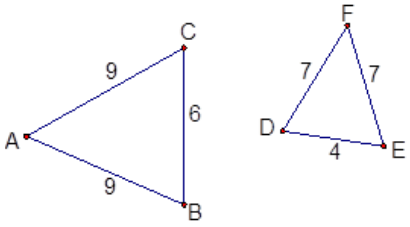
Self-Assess: 1 (Uh oh) 2 3 (I am okay) 4 5 (I got this!!!)

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

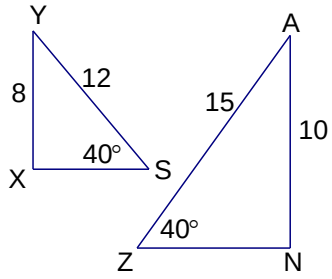
5) △ABC ~ △_____ by _____



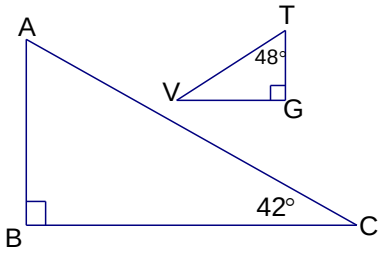
6) △ABC ~ △_____ by _____



7) △YXS ~ △_____ by _____



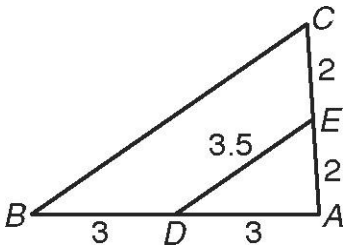
8) △ABC ~ △ _____ by _____



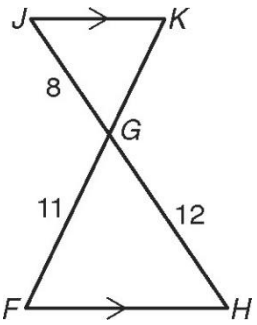
Target 7.3: Find side lengths of similar triangles.

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

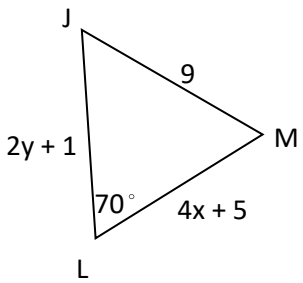
9) Find BC given that △EAD ~ △CAB.

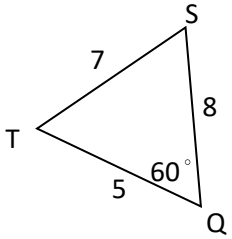


10) Why are the triangles similar? Find GK.



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

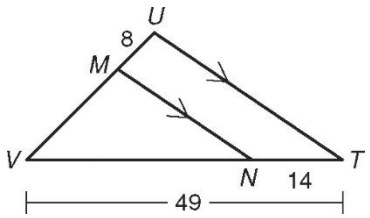




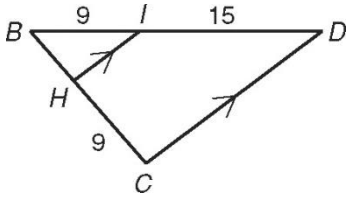
Target 7.4.a: Use the Triangle Proportionality Theorem to find lengths of segments.

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

12) Find the length of segment MV:



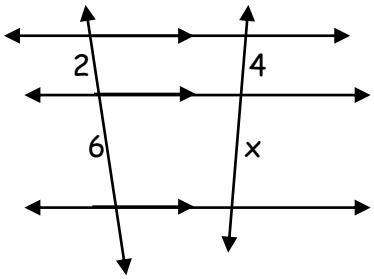
13) Find the length of segment BH.



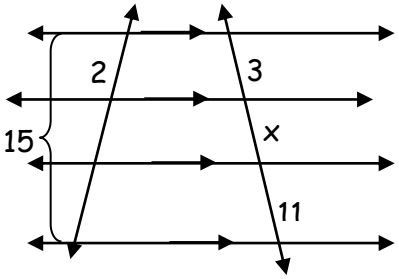
Target 7.4.b: Use the Two Transversal Proportionality Corollary to find lengths of segments.

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

14) Find x.



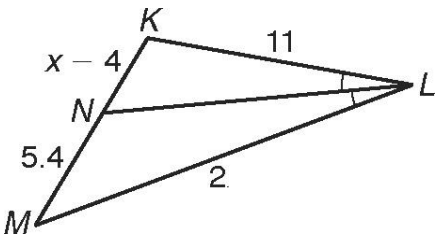
15) Find x.



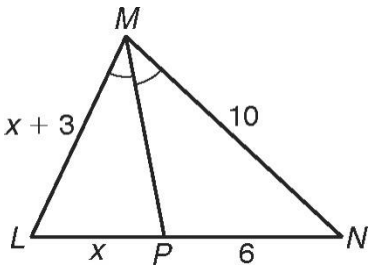
Target 7.4.c: Use the Angle Bisector Theorem to find lengths of segments.

Self-Assess: 1(Uh oh) 2 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!!!)

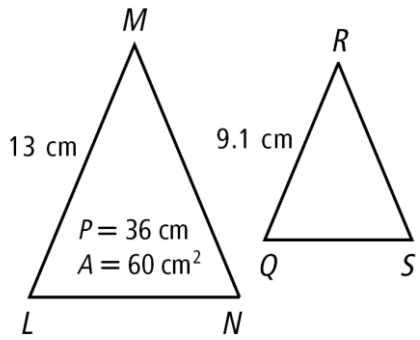
18) John, who is 5 ft. 9 in. tall, wanted to know the height of the MacDonald's sign. At the same time of day, he measured his shadow and the sign's shadow. He found that his shadow was 7 ft. 8 in. and the the sign's shadow was 38 ft. 4 in. shadow. What is the height of the sign in inches? In feet?

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)*

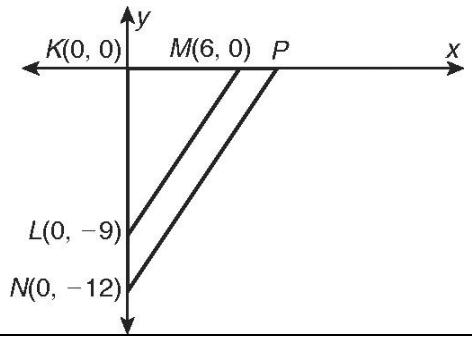
Target 7.5.b: Find measurements of similar polygons.

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 <u>perimeter</u> and <u>area</u> of $\triangle$ QRS.



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

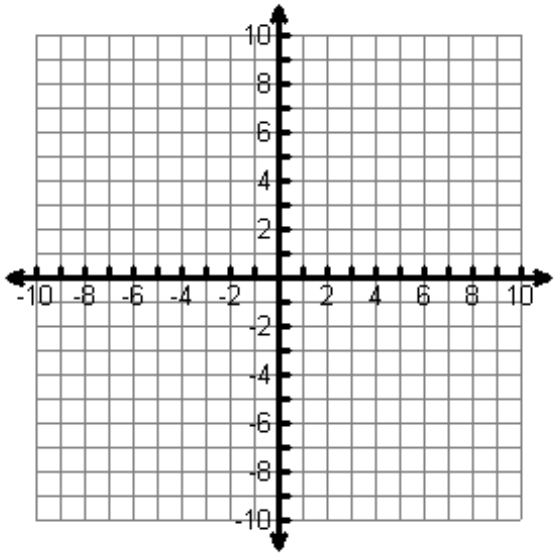


Target 7.6.a: Find points on the coordinate plane that partition a segment porportionally.

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

31. Given: A(1, 3) and B(-3, -5)

a) Find point P such that P divides the segment from A to B in the ratio 1:3



b) Find point Q such that Q divides the segment from B to A in the ratio 3:7.

Target 7.6.b: Prove triangles are similar on the coordinate plane.				
Self-Assess: 1 (Uh oh)	2	3(I am okay)	4	5(I got this!!!)

32. Given: J(-1, 0), K(-3, -4), L(3,-2), M(-4, -6), and N(5, -3)

Prove: ΔJKL ~ ΔJMN