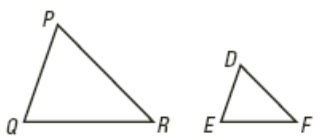
Math 2 Name_____

Unit 4A Day 4 CW/HW Date:_____

1. If polygons are similar then what do you know about the corresponding sides and the corresponding angles?

Given the similar figures, name <u>all pairs</u> of corresponding sides and angles. Look at the similarity statement to help.

2. $\Delta PQR \sim \Delta DEF$

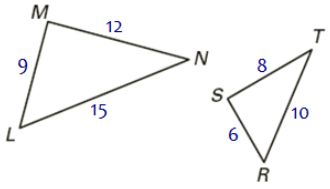


$\overline{QP} \rightarrow$ _____ $\angle Q \cong$ _____

$\overline{PR} \rightarrow$ _____ $\angle P \cong$ _____

$\overline{RQ} \rightarrow$ _____ $\angle R \cong$ _____

3. $\Delta LMN \sim \Delta RST$

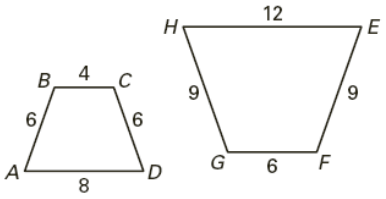


$\overline{LM} \rightarrow$ _____ $\angle L \cong$ _____

$\overline{MN} \rightarrow$ _____ $\angle M \cong$ _____

$\overline{NL} \rightarrow$ _____ $\angle N \cong$ _____

4. $ABCD \sim HGFE$



$\overline{AB} \rightarrow$ _____ $\angle A \cong$ _____

$\overline{BC} \rightarrow$ _____ $\angle B \cong$ _____

$\overline{CD} \rightarrow$ _____ $\angle C \cong$ _____

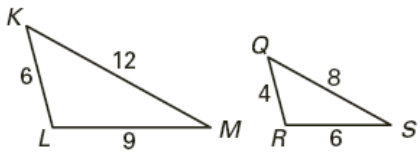
$\overline{DA} \rightarrow$ _____ $\angle D \cong$ _____

Use the similar polygons above to write the statement of proportionality for each:

_____ = _____ = _____ _____ = _____ = _____ _____ = _____ = _____ = _____

Complete the similarity statement for the similar figures and then find the <u>scale factor</u> . REDUCE fractions!

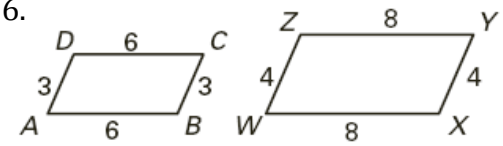
5.



$\Delta LKM \sim \Delta$ _____

Scale Factor:

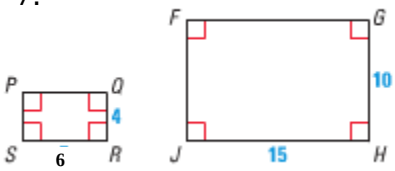
6.



$CBAD \sim$ _____

Scale Factor:

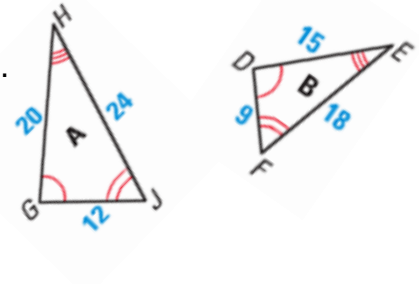
7.



$RSPQ \sim$ _____

Scale Factor:

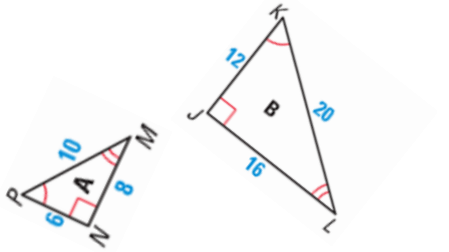
8.



$\Delta HJG \sim \Delta$ _____

Scale Factor:

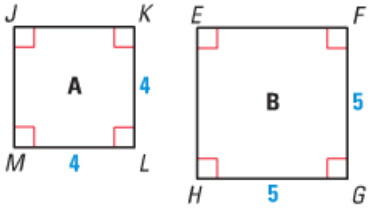
9.



$\Delta NPM \sim \Delta$ _____

Scale Factor:

10.

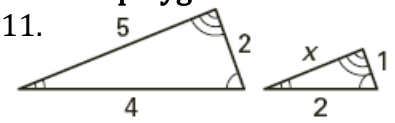


$KJML \sim$ _____

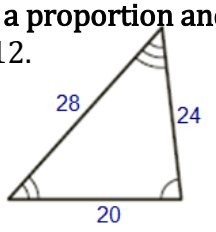
Scale Factor:

The two polygons are similar. Write a proportion and solve for x.

11.



12.



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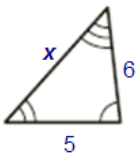
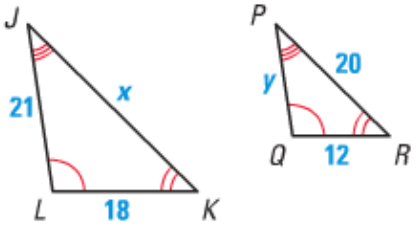


1). Complete the similarity statement for the similar figures and then find the 2). scale factor . Next, write proportions and 3). SOLVE for the missing lengths.

14.



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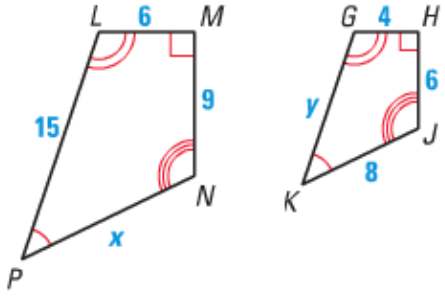

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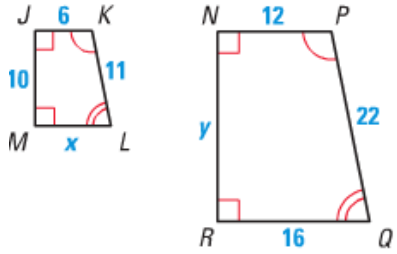
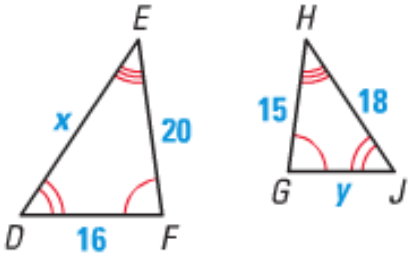


17.



18. A 6 ft tall tent standing next to a cardboard box casts a 9 ft shadow. If the cardboard box casts a shadow that is 6 ft long then how tall is it? Draw a diagram with similar triangles.

19. A telephone booth that is 8 ft tall casts a shadow that is 4 ft long. Find the height of a lawn ornament that casts a 2 ft. shadow. Draw a diagram with similar triangles.

20. If a 42.9 ft tall flagpole casts a 253.1 ft long shadow then how long is the shadow that a 6.2 ft tall woman casts?. Draw a diagram with similar triangles.