

Name: _____

Class: _____

Topic: **(8.1-8.2) Similar Figures**

Date: _____

Main Ideas/Questions | **Notes**

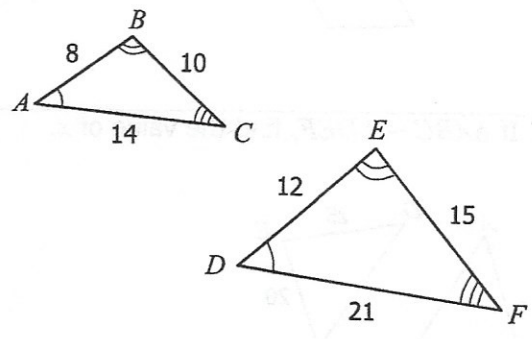
Similar Polygons

- Polygons with the same _____ but different _____.
- Polygons are similar if:
 - (1) _____
 - (2) _____
- The ratio of corresponding sides is called the _____.
- If polygons are similar, then their _____ are also proportional.

Scale Factor

{Order Matters!}

- What is the scale factor of $\triangle ABC$ to $\triangle DEF$?
- What is the scale factor of $\triangle DEF$ to $\triangle ABC$?
- What is the ratio of the perimeter of $\triangle DEF$ to $\triangle ABC$?



Similarity Statements

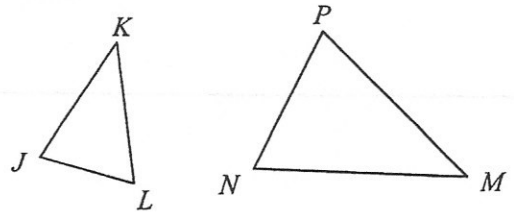
Symbol for Similar:

A valid similarity statement must match corresponding angles and sides!

Write a similarity statement for the triangles above:

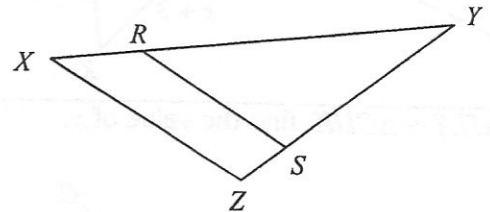
Directions: List all congruent angles and write a proportion that relates the corresponding sides.

1. $\triangle JKL \sim \triangle PMN$



Angles	Sides

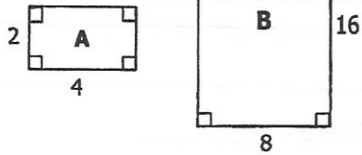
2. $\triangle XYZ \sim \triangle RYS$



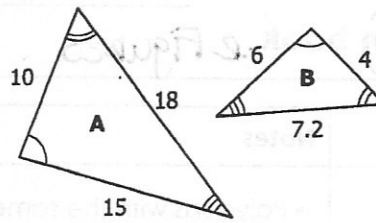
Angles	Sides

3. **Directions:** The pairs of polygons below are similar. Give the scale factor of figure A to figure B.

a.

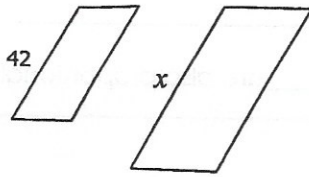


b.

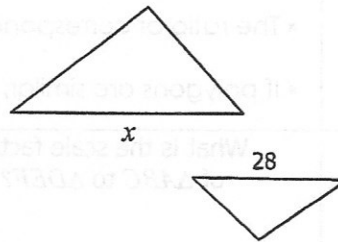


Using Similar Figures to Solve for Missing Measures.

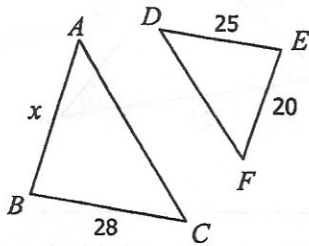
4. If the figures below are similar with a scale factor of 2:3, find the value of x .



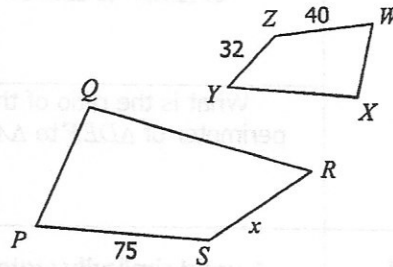
5. If the figures below are similar with a scale factor of 6:5, find the value of x .



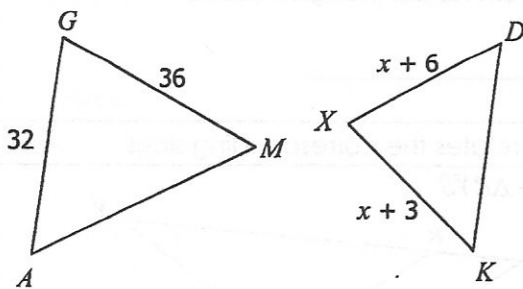
6. If $\triangle ABC \sim \triangle DEF$, find the value of x .



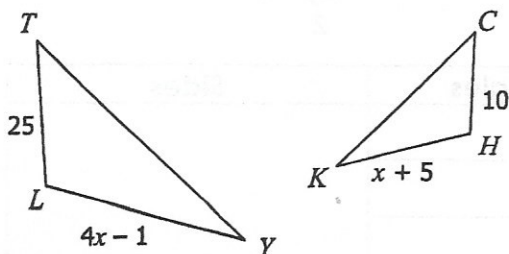
7. If $PQRS \sim WXYZ$, find the value of x .



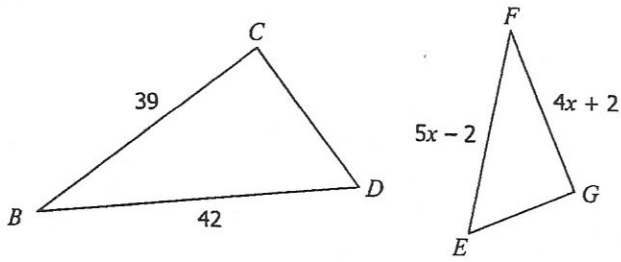
8. If $\triangle AGM \sim \triangle KXD$, find the value of x .



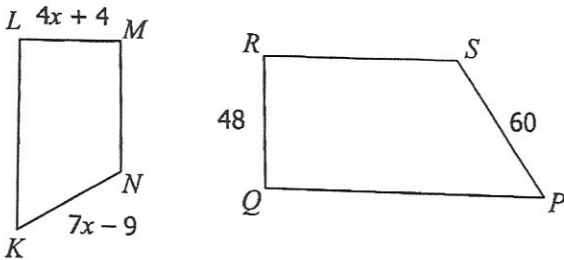
9. If $\triangle TLY \sim \triangle CHK$, find the value of x .



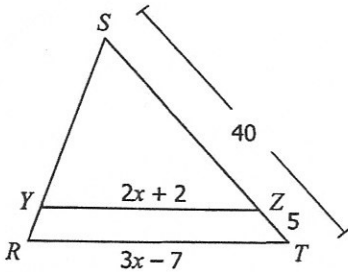
10. $\triangle ABC \sim \triangle FGE$



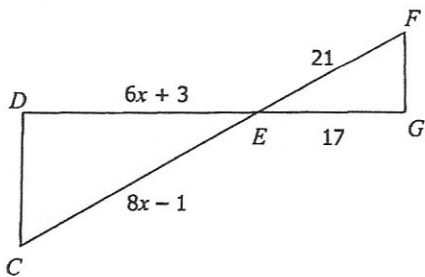
11. $KLMN \sim PQRS$



12. $\triangle RST \sim \triangle YSZ$



13. $\triangle CDE \sim \triangle FGE$



14. If $\triangle KLM \sim \triangle PQR$ with a scale factor of 3:5, find the perimeter of $\triangle PQR$.

