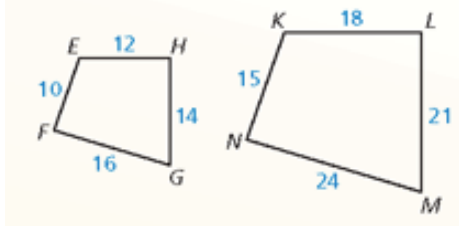


Unit 6: Similarity Study Guide

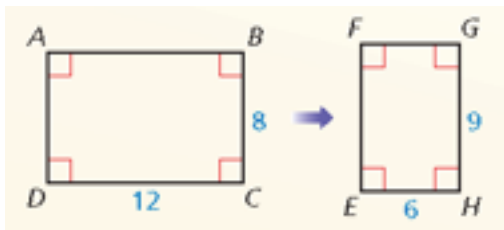
6.1 Similar Polygons

1. In the diagram, $EHGF \sim KLMN$. Find the scale factor from $EHGF$ to $KLMN$. Then list all pairs of congruent angles and write the ratios of the corresponding side lengths in a statement of proportionality.

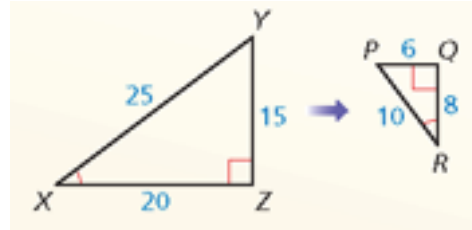


Find the scale factor. Then list all pairs of congruent angles and write the ratios of the corresponding side lengths in a statement of proportionality.

2. $ABCD \sim EFGH$



3. $\triangle XYZ \sim \triangle RPQ$

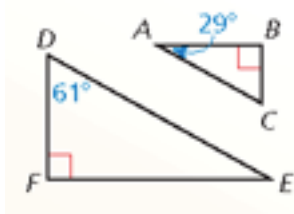


4. Two similar triangles have a scale factor of 3: 5. The altitude of the larger triangle is 24 inches. What is the altitude of the smaller triangle?

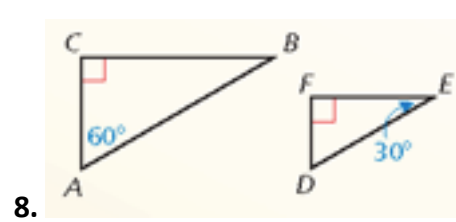
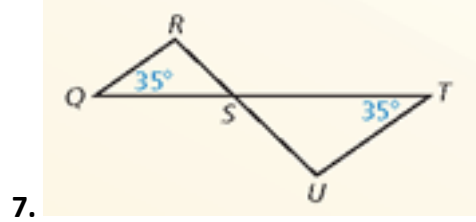
5. Two similar triangles have a pair of corresponding sides of length 12 meters and 8 meters. The larger triangle has a perimeter of 48 meters and an area of 180 square meters. Find the perimeter and area of the smaller triangle.

6.2 Proving Triangle Similarity by AA

6. Determine whether the triangles are similar. If they are, write a similarity statement. Explain your reasoning.



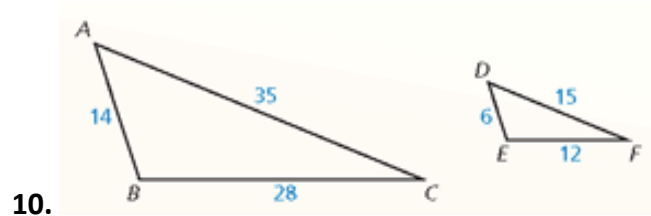
Show that the triangles are similar. Write a similarity statement.

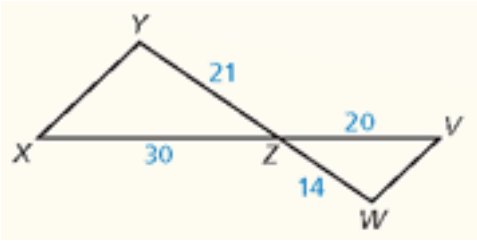


9. A cellular telephone tower casts a shadow that is 72 feet long, while a nearby tree that is 27 feet tall casts a shadow that is 6 feet long. How tall is the tower?

6.3 Proving Triangles Similarity by SSS and SAS

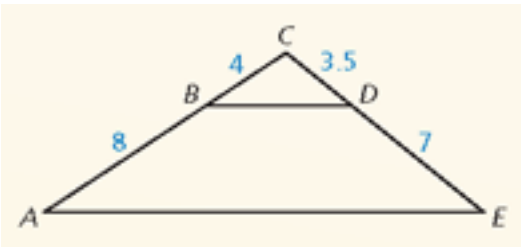
Show that the triangles are similar.



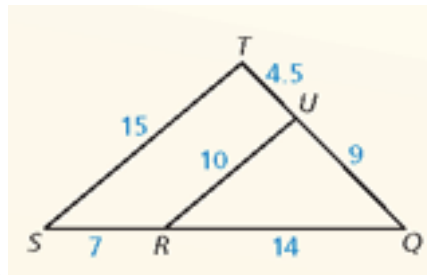


11.

Use the SSS Similarity Theorem or the SAS Similarity Theorem to show that the triangles are similar.



12.



13.

14. Find the value of x that makes $\triangle ABC \sim \triangle DEF$.

