

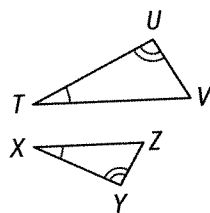
PRACTICE & PROBLEM SOLVING

UNDERSTAND

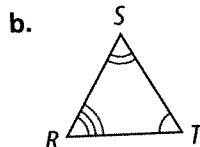
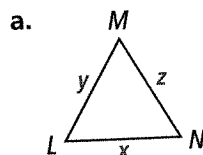
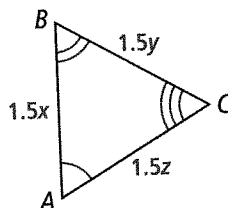
- 10. Construct Arguments** Write a proof of the Angle-Angle Similarity Theorem. © MP.3

Given: $\angle T \cong \angle X$
 $\angle U \cong \angle Y$

Prove: $\triangle TUV \sim \triangle XYZ$

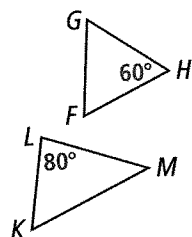


- 11. Use Structure** For each triangle, name the triangle similar to $\triangle ABC$ and explain why it is similar. © MP.7



- 12. Construct Arguments** If two triangles are congruent by ASA, are the triangles similar? Explain. © MP.3

- 13. Error Analysis** What is Russel's error? © MP.3



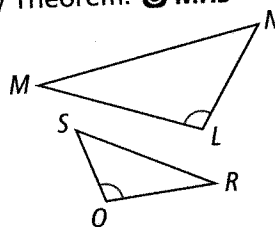
180 - 80 - 60 = 40,
 so the unlabeled angle in
 each triangle is 40°. So,
 $m\angle M = 60$, and thus
 $\triangle FGH \sim \triangle KLM$ by AA ~.

X

- 14. Construct Arguments** Write a proof of the Side-Angle-Side Similarity Theorem. © MP.3

Given: $\frac{LM}{QR} = \frac{LN}{QS}$
 $\angle L \cong \angle Q$

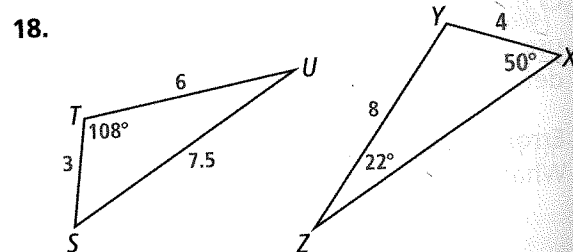
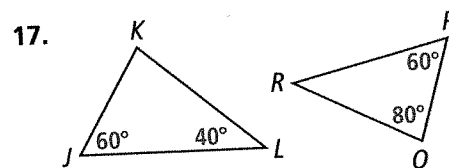
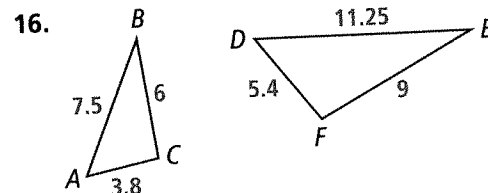
Prove: $\triangle LMN \sim \triangle QRS$



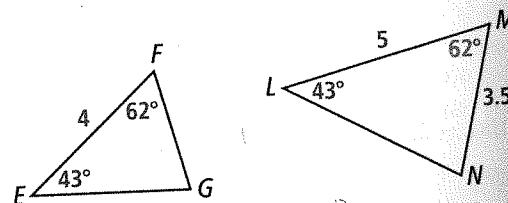
- 15. Higher Order Thinking** Explain why there is no Side-Side-Angle Similarity Theorem.

PRACTICE

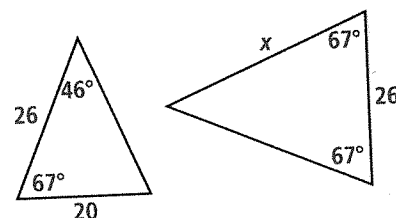
For Exercise 16–18, explain whether each pair of triangles is similar. SEE EXAMPLES 1–3



- 19. What is FG?** SEE EXAMPLES 4 AND 5



- 20. What is the value of x?** SEE EXAMPLES 4 AND 5



- 21. Write a proof of the Side-Side-Side Similarity Theorem.**

Given: $\frac{AB}{EF} = \frac{BC}{FG} = \frac{AC}{AG}$

Prove: $\triangle ABC \sim \triangle EFG$

