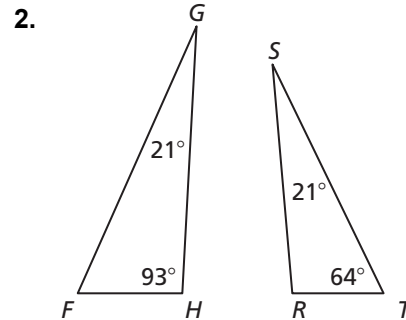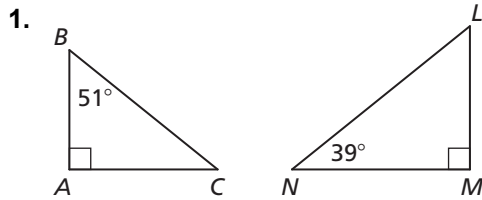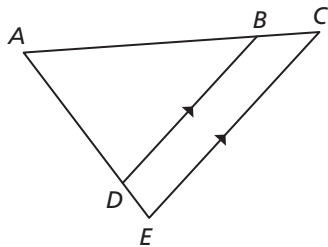Name_____ Date _____

8.4 Practice A

In Exercises 1 and 2, determine whether the triangles are similar. If they are, write a similarity statement. Explain your reasoning.
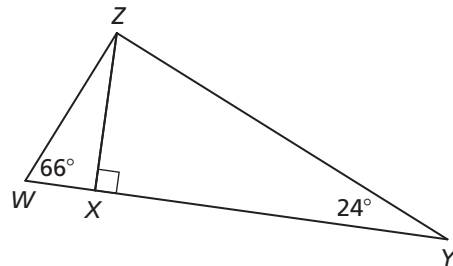
1.

2.

In Exercises 3 and 4, show that the two triangles are similar.

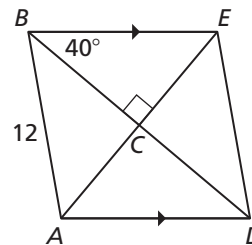**3.** $\triangle ABD$ and $\triangle ACE$

4. $\triangle WXZ$ and $\triangle ZXY$

5. In the diagram, $\triangle ABC \sim \triangle EDC$.

   a. Is $\overline{AB} \parallel \overline{DE}$? Explain your reasoning.

   b. Show that $\triangle ACD \sim \triangle ECB$.

   c. Find $m\angle CAD$.

   d. Find ED.

   e. Find AD. Explain your reasoning.

In Exercises 6 and 7, is it possible for $\triangle ABC$ and $\triangle XYZ$ to be similar? Explain your reasoning.

6. $m\angle A = 43°$, $m\angle B = 61°$, $m\angle Y = 61°$, and $m\angle Z = 74°$

7. $\angle A$ and $\angle X$ are right angles and $\angle B \cong \angle Z$.

8. Use the figure to write a two-column proof.

   Given $\angle Q \cong \angle T$

   Prove $\overline{PQ} \parallel \overline{ST}$