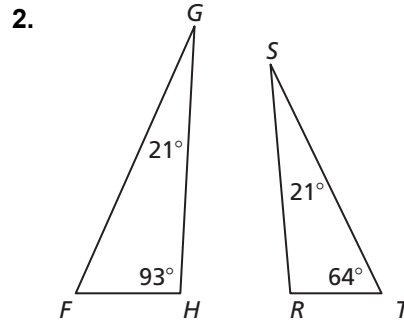
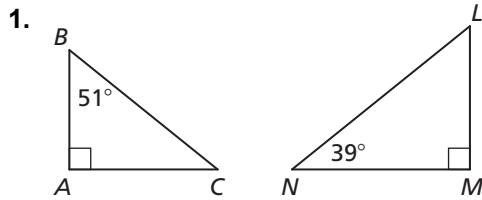


# 8.2

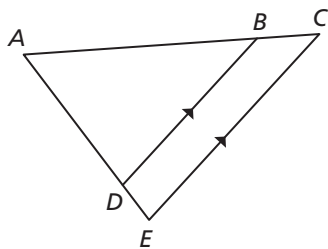
## Practice A

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

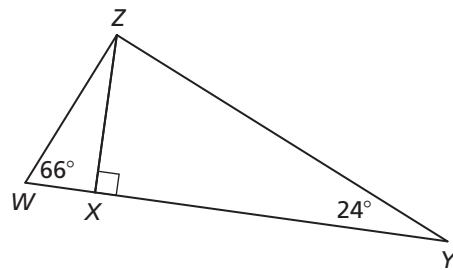


In Exercises 3 and 4, show that the two triangles are similar.

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

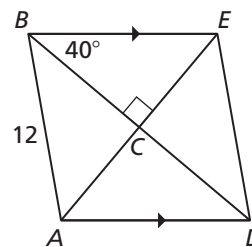


4.  $\triangle WXZ$  and  $\triangle ZXY$



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

- Is  $\overline{AB} \parallel \overline{DE}$ ? Explain your reasoning.
- Show that  $\triangle ACD \sim \triangle ECB$ .
- Find  $m\angle CAD$ .
- Find  $ED$ .
- Find  $AD$ . Explain your reasoning.



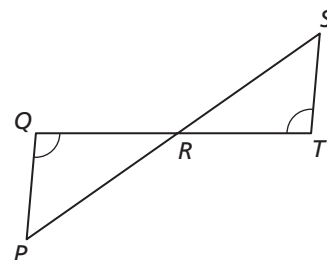
In Exercises 6 and 7, is it possible for  $\triangle ABC$  and  $\triangle XYZ$  to be similar? Explain your reasoning.

- $m\angle A = 43^\circ$ ,  $m\angle B = 61^\circ$ ,  $m\angle Y = 61^\circ$ , and  $m\angle Z = 74^\circ$
- $\angle A$  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:**  $\overline{PQ} \parallel \overline{ST}$

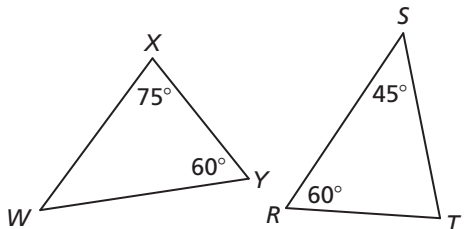


# 8.2

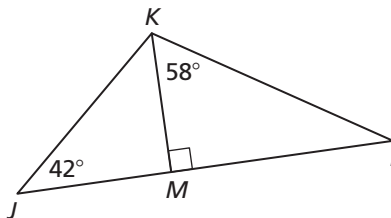
## Practice B

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

1.

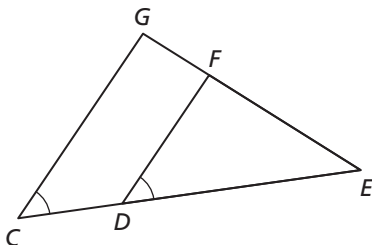


2.

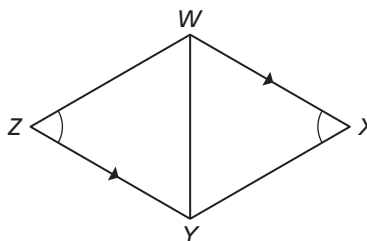


In Exercises 3 and 4, show that the two triangles are similar.

3.  $\triangle ECG$  and  $\triangle EDF$



4.  $\triangle XWY$  and  $\triangle ZYW$



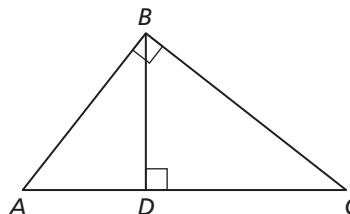
In Exercises 5 and 6, is it possible for  $\triangle ABC$  and  $\triangle XYZ$  to be similar? Explain your reasoning.

5.  $\angle A$  and  $\angle X$  are supplementary and  $\angle B$  and  $\angle Z$  are complementary.
6.  $m\angle A = 75^\circ$  and  $m\angle Z = 105^\circ$
7. Your friend claims that if you know three angles of one quadrilateral are congruent to three angles of another quadrilateral, then the two quadrilaterals are similar. Is your friend correct? Explain your reasoning.
8. The height of the Empire State Building is 1250 feet tall. Your friend, who is 6 feet 3 inches tall, is standing nearby and casts a shadow that is 33 inches long. What is the length of the shadow of the Empire State Building?

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

**Given:**  $\angle ABC$  and  $\angle BDC$  are right angles.

**Prove:**  $\angle A \cong \angle CBD$



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

**Given:**  $\overline{YZ} \cong \overline{YV}$

$\overline{XY} \cong \overline{WY}$

**Prove:**  $\triangle XYW \sim \triangle VYZ$

