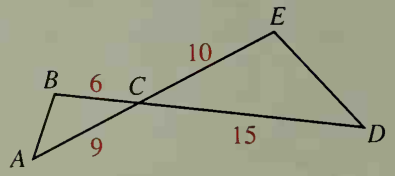
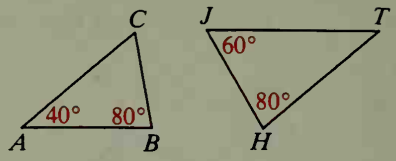
Written Exercises

Name two similar triangles. What postulate or theorem justifies your answer?

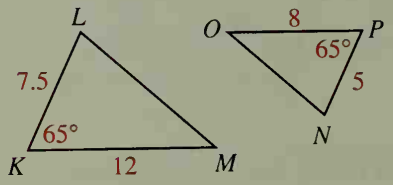
A **1.**



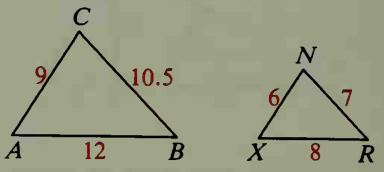
2.



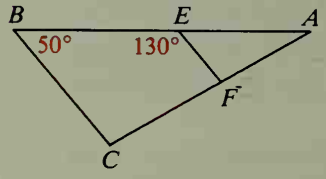
3.



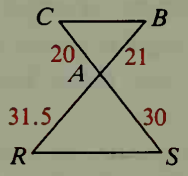
4.



5.



6.

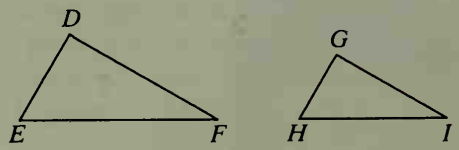


One triangle has vertices A, B, and C. Another has vertices T, R, and I. Are the two triangles similar? If so, state the similarity and the scale factor.

	AB	BC	AC	TR	RI	TI
7.	6	8	10	9	12	15
8.	6	8	10	12	22	16
9.	6	8	10	20	25	15
10.	6	8	10	10	7.5	12.5

11. Given: $\frac{DE}{GH} = \frac{DF}{GI} = \frac{EF}{HI}$

Prove: $\angle E \cong \angle H$

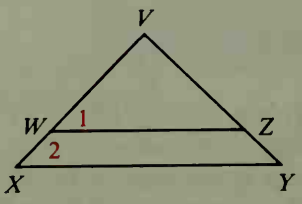


12. Given: $\frac{DE}{GH} = \frac{EF}{HI}$; $\angle E \cong \angle H$

Prove: $\frac{EF}{HI} = \frac{DF}{GI}$

B **13.** Given: $\frac{VW}{VX} = \frac{VZ}{VY}$

Prove: $\overline{WZ} \parallel \overline{XY}$



14. Given: $\frac{VW}{VY} = \frac{VZ}{VX}$

Which one(s) of the following *must* be true?

(1) $\triangle VWZ \sim \triangle VXY$ (2) $\overline{WZ} \parallel \overline{XY}$ (3) $\angle 1 \cong \angle Y$