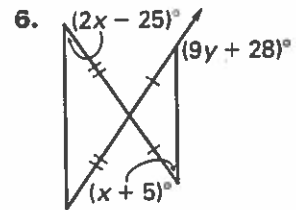
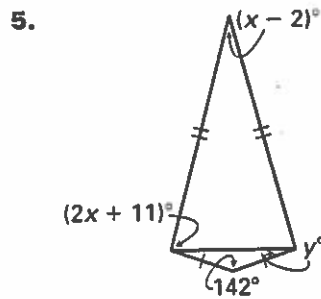
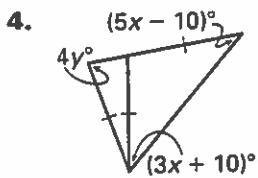
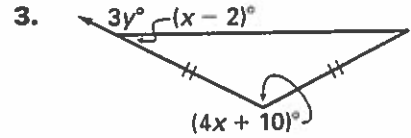
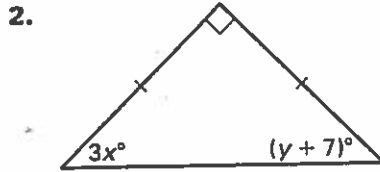
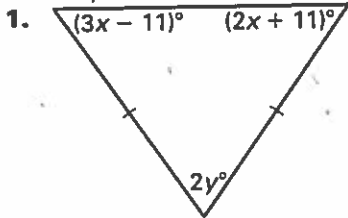


LESSON
4.7

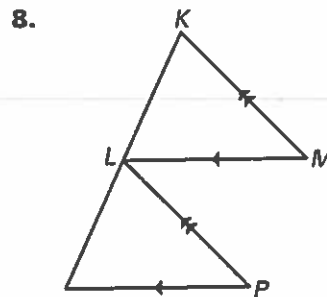
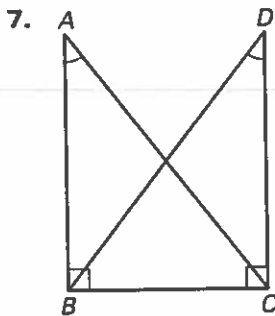
Practice

For use with pages 264–270

Find the values of x and y .



Decide whether enough information is given to prove that the triangles are congruent. *Explain your answer.*



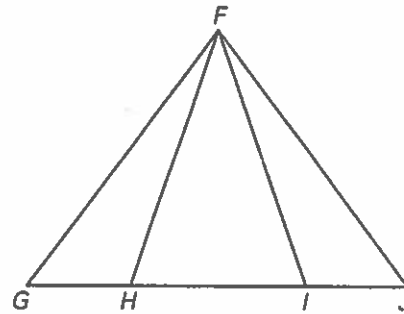
LESSON
4.7

Practice *continued*
For use with pages 264–270

In Exercises 9 and 10, complete the proof.

9. **GIVEN:** $\overline{FG} \cong \overline{FJ}$, $\overline{HG} \cong \overline{IJ}$

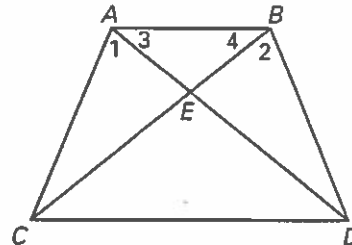
PROVE: $\overline{HF} \cong \overline{IF}$



Statements	Reasons
1. $\overline{FG} \cong \overline{FJ}$	1. ?
2. ?	2. Base Angles Theorem
3. $\overline{HG} \cong \overline{IJ}$	3. ?
4. ?	4. SAS Congruence Postulate
5. $\overline{HF} \cong \overline{IF}$	5. ?

10. **GIVEN:** $\angle 1 \cong \angle 2$, $\overline{AC} \cong \overline{BD}$

PROVE: $\angle 3 \cong \angle 4$



Statements	Reasons
1. $\angle 1 \cong \angle 2$	1. ?
2. $\overline{AC} \cong \overline{BD}$	2. ?
3. $\angle AEC \cong \angle BED$	3. ?
4. ?	4. AAS Congruence Theorem
5. $\overline{AE} \cong \overline{BE}$	5. ?
6. $\angle 3 \cong \angle 4$	6. ?

LESSON
4.7

Practice *continued*
For use with pages 264–270

In Exercises 11–16, use the diagram. Complete the statement. Tell what theorem you used.

11. If $\overline{PQ} \cong \overline{PT}$, then $\angle \underline{\quad} \cong \angle \underline{\quad}$.

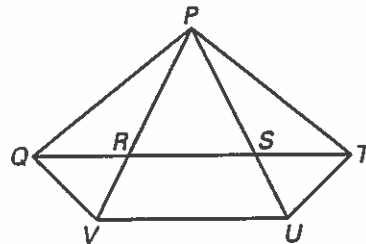
12. If $\angle PQV \cong \angle PVQ$, then $\underline{\quad} \cong \underline{\quad}$.

13. If $\overline{RP} \cong \overline{SP}$, then $\angle \underline{\quad} \cong \angle \underline{\quad}$.

14. If $\overline{TP} \cong \overline{TR}$, then $\angle \underline{\quad} \cong \angle \underline{\quad}$.

15. If $\angle PSQ \cong \angle SPQ$, then $\underline{\quad} \cong \underline{\quad}$.

16. If $\angle PUV \cong \angle PVU$, then $\underline{\quad} \cong \underline{\quad}$.



In Exercises 17–19, use the following information.

Prize Wheel A radio station sets up a prize wheel when they are out promoting their station. People spin the wheel and receive the prize that corresponds to the number the wheel stops on. The 9 triangles in the diagram are isosceles triangles with congruent vertex angles.

17. The measure of the vertex angle of triangle 1 is 40° . Find the measures of the base angles.

18. Explain how you know that triangle 1 is congruent to triangle 6.

19. Trace the prize wheel. Then form a triangle whose vertices are the midpoints of the bases of the triangles 1, 4, and 7. What type of triangle is this?

