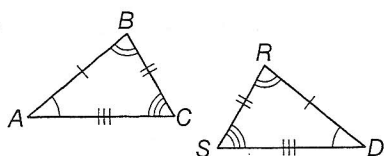


4-3 Practice

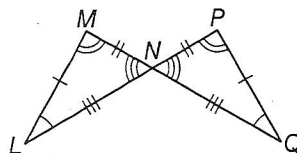
Congruent Triangles

Show that the polygons are congruent by indentifying all congruent corresponding parts. Then write a congruence statement.

1.

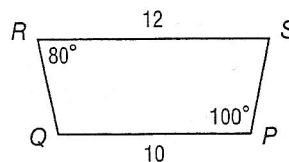
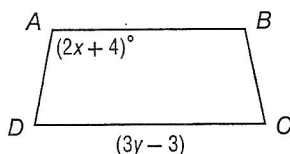


2.



Polygon $ABCD \cong$ polygon $PQRS$.

3. Find the value of x .



4. Find the value of y .

5. **PROOF** Write a two-column proof.

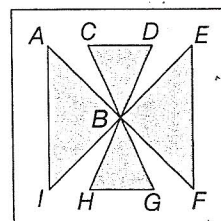
Given: $\angle P \cong \angle R$, $\angle PSQ \cong \angle RSQ$, $\overline{PQ} \cong \overline{RQ}$,
 $\overline{PS} \cong \overline{RS}$

Prove: $\triangle PQS \cong \triangle RQS$

6. QUILTING

a. Indicate the triangles that appear to be congruent.

b. Name the congruent angles and congruent sides of a pair of congruent triangles.

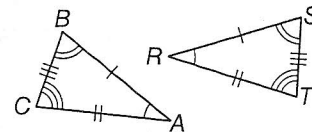


4-3 Study Guide and Intervention

Congruent Triangles

Congruence and Corresponding Parts

Triangles that have the same size and same shape are **congruent triangles**. Two triangles are congruent if and only if all three pairs of corresponding angles are congruent and all three pairs of corresponding sides are congruent. In the figure, $\triangle ABC \cong \triangle RST$.

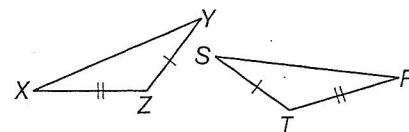


Third Angles Theorem

If two angles of one triangle are congruent to two angles of a second triangle, then the third angles of the triangles are congruent.

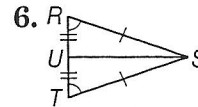
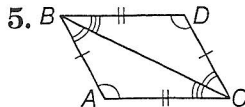
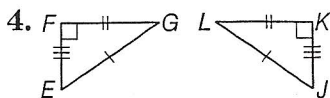
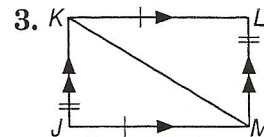
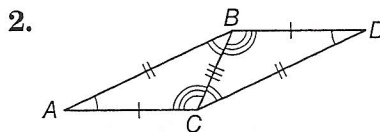
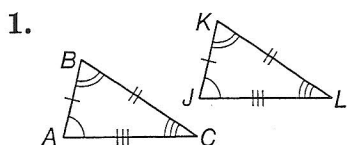
Example If $\triangle XYZ \cong \triangle RST$, name the pairs of congruent angles and congruent sides.

$\angle X \cong \angle R$, $\angle Y \cong \angle S$, $\angle Z \cong \angle T$
 $\overline{XY} \cong \overline{RS}$, $\overline{XZ} \cong \overline{RT}$, $\overline{YZ} \cong \overline{ST}$



Exercises

Show that the polygons are congruent by identifying all congruent corresponding parts. Then write a congruence statement.



Suppose $\triangle ABC \cong \triangle DEF$

7. Find the value of x .

8. Find the value of y .

