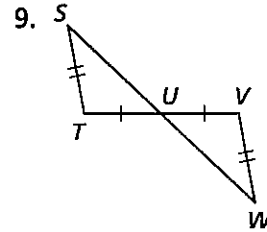
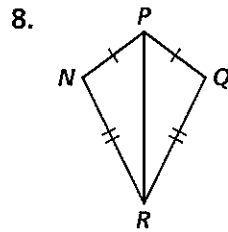
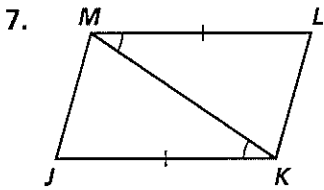
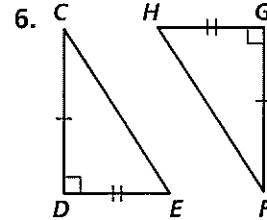
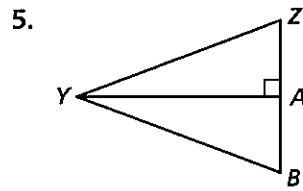
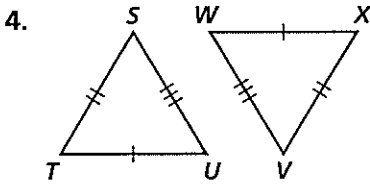
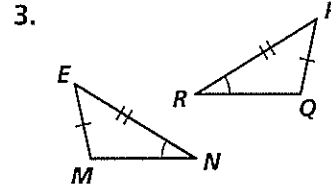
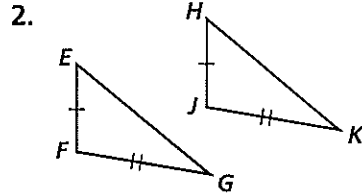
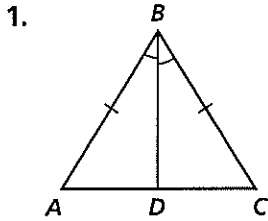


Practice 4-2

Triangle Congruence by SSS and SAS

Decide whether you can use the SSS or SAS Postulate to prove the triangles congruent. If so, write the congruence statement, and identify the postulate. If not, write *not possible*.



Draw a triangle. Label the vertices *A*, *B*, and *C*.

- What angle is between \overline{BC} and \overline{AC} ?
- What sides include $\angle B$?
- What angles include \overline{AB} ?
- What side is included between $\angle A$ and $\angle C$?

14. **Developing Proof** Supply the reasons in this proof.

Given: $\overline{AB} \cong \overline{DC}$, $\angle BAC \cong \angle DCA$

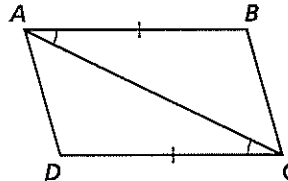
Prove: $\triangle ABC \cong \triangle CDA$

Statements

- $\overline{AB} \cong \overline{DC}$, $\angle BAC \cong \angle DCA$
- $\overline{AC} \cong \overline{CA}$
- $\triangle ABC \cong \triangle CDA$

Reasons

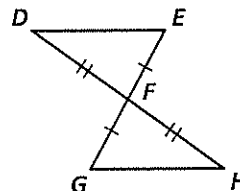
- ?
- ?
- ?



15. Write a proof.

Given: $\overline{EF} \cong \overline{FG}$, $\overline{DF} \cong \overline{FH}$

Prove: $\triangle DFE \cong \triangle HFG$



Reteaching 4-2

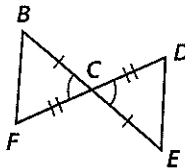
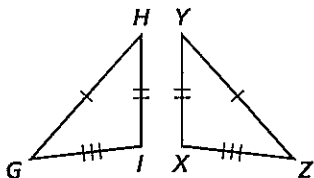
Triangle Congruence by SSS and SAS

OBJECTIVE: Proving two triangles congruent using the SSS and SAS postulates

MATERIALS: Ruler, protractor

Example

Name the triangle congruence postulate you can use to prove each pair of triangles congruent.

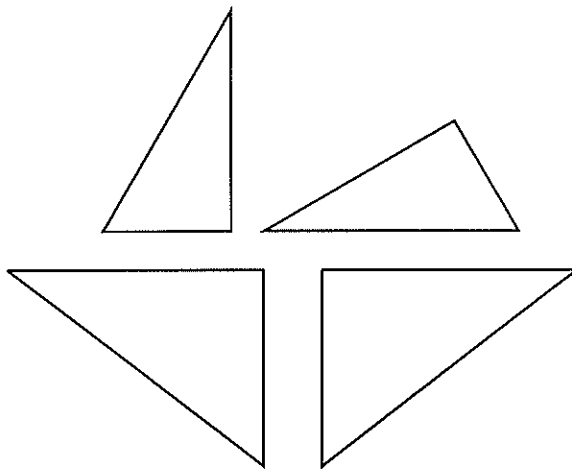


- a. Because three sides of $\triangle GHI$ are congruent to three sides of $\triangle ZYX$, $\triangle GHI \cong \triangle ZYX$ by the SSS Postulate.
- b. Because two sides and the included angle of $\triangle BCF$ are congruent to two sides and the included angle of $\triangle ECD$, $\triangle BCF \cong \triangle ECD$ by the SAS Postulate.

Exercises

Refer to the triangles at the right.

- Use a ruler to show that the top two triangles at the right are congruent by the SSS Postulate.
- Use a ruler and a protractor to show that the two large triangles at the right are congruent by the SAS Postulate.



Name the triangle congruence postulate you can use to prove each pair of triangles congruent. Then state the triangle congruence.

