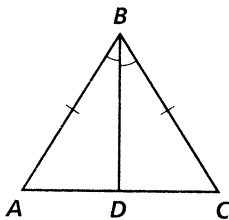


Practice 4-2

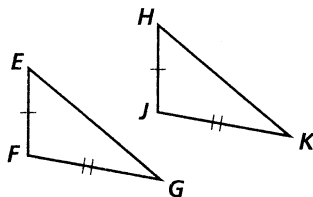
Triangle Congruence by SSS and SAS

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*.

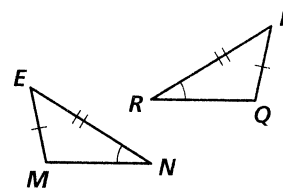
1.



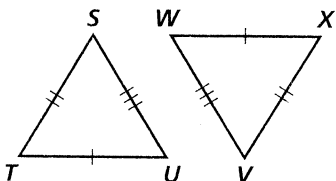
2.



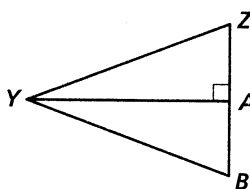
3.



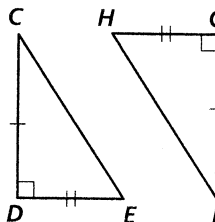
4.



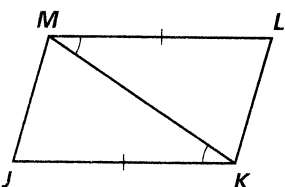
5.



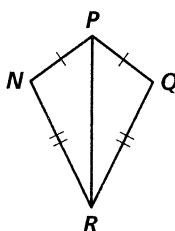
6.



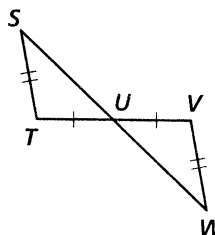
7.



8.



9.



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

10. What angle is between \overline{BC} and \overline{AC} ?
11. What sides include $\angle B$?
12. What angles include \overline{AB} ?
13. What side is included between $\angle A$ and $\angle C$?
14. **Developing Proof** Supply the reasons in this proof.

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

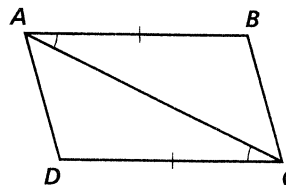
Prove: $\triangle ABC \cong \triangle CDA$

Statements

1. $\overline{AB} \cong \overline{DC}$, $\angle BAC \cong \angle DCA$
2. $\overline{AC} \cong \overline{CA}$
3. $\triangle ABC \cong \triangle CDA$

Reasons

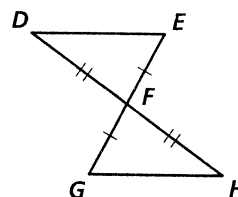
- a. ?
- b. ?
- c. ?



15. Write a proof.

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

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



Reteaching 4-2

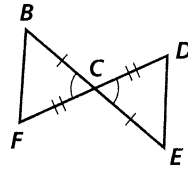
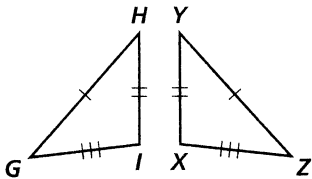
Triangles Congruent by SSS and SAS

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.

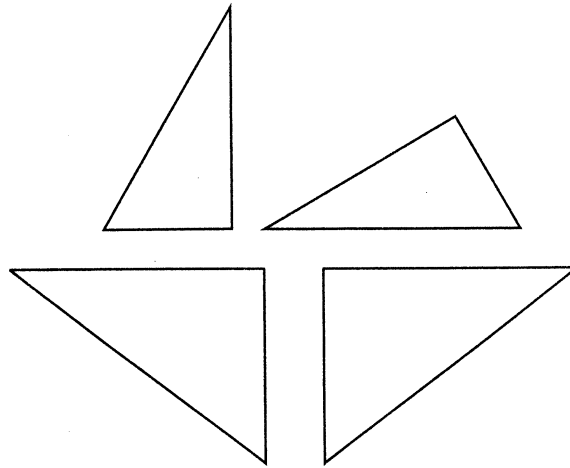


- a. Because three sides of $\triangle GHI$ are congruent to three sides of $\triangle ZYX$, $\triangle GHI \cong \triangle ZYX$ by the SSS Postulate.
- b. Because two sides and the included angle of $\triangle BCF$ are congruent to two sides and the included angle of $\triangle ECD$, $\triangle BCF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

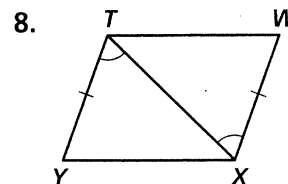
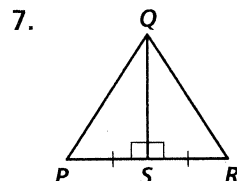
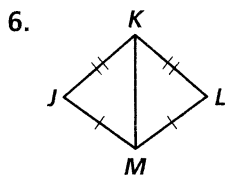
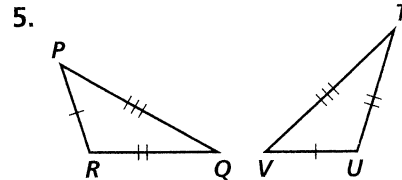
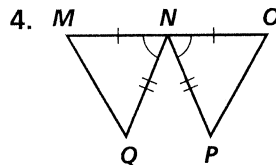
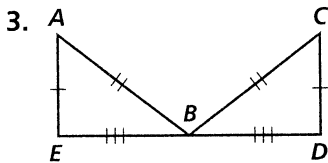
Exercises

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.



4A: Graphic Organizer

For use before Lesson 4-1

Study Skill: As you read over the material in the chapter take notes and write questions that you have. You should read the material before the teacher presents it. This will help you understand some of the material better.

Write your answers.

1. What is the chapter title? _____

2. Find the Table of Contents page for this chapter at the front of the book. Name four topics you will study in this chapter.

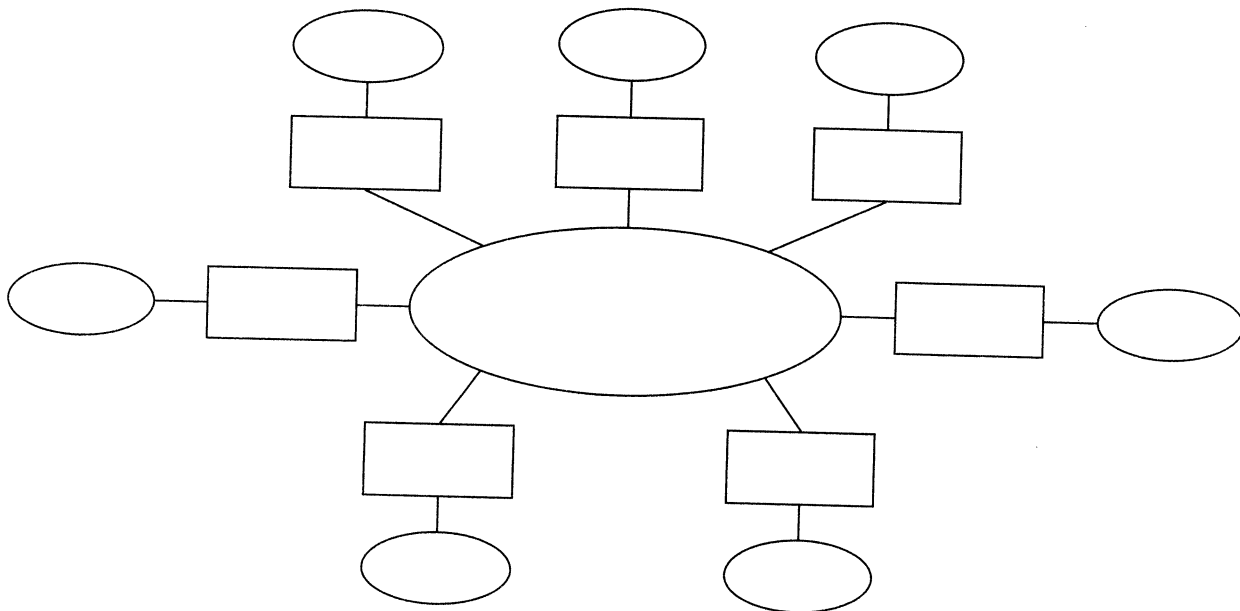
3. What is the topic of the Reading Math page? _____

4. What is the topic of the Test-Taking Strategy page? _____

5. Look through the pages of the chapter. List four real-world connections that you see discussed in this chapter.

6. Complete the graphic organizer below as you work through the chapter.

- In the center, write the title of the chapter.
- When you begin a lesson, write the lesson name in a rectangle.
- When you complete a lesson, write a skill or key concept in an oval linked to that lesson block.
- When you complete the chapter, use this graphic organizer to help you review.



4B: Reading/Writing Math Symbols

For use after Lesson 4-3

Study Skill: Abbreviations or certain combinations and arrangements of letters (sometimes Greek) take on universally accepted meanings. For example, in geometry, the letters *SSS* are accepted shorthand for the Side-Side-Side congruence postulate. This “symbolism” can be a timesaving device if you can recognize some of the more popular arrangements.

Write the meaning for each abbreviation or letter combination.

1. *SAS* _____
2. *AAS* _____
3. $\triangle XYZ$ _____
4. $\angle PQR$ _____
5. $\triangle BCD$ _____
6. $\angle C$ _____
7. \overline{BD} _____
8. \overleftrightarrow{ST} _____
9. \overrightarrow{WX} _____
10. *HL* _____
11. l_3 _____
12. $\angle 6$ _____
13. *ASA* _____
14. $\triangle XFK$ _____