

Name _____ Date _____

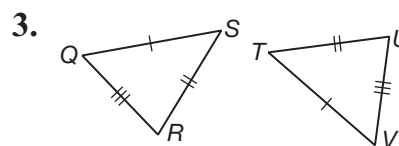
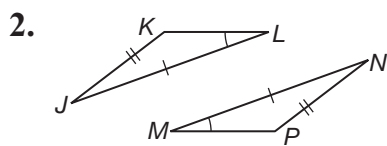
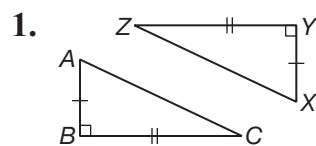
Congruent Triangles (Pages 210–212)

Triangles that have the same size and shape are called **congruent triangles**. When two triangles are congruent, the parts that “match” are called **corresponding parts**. Two triangles are congruent when all of their corresponding parts are congruent. However, you do not need to know that all six parts are congruent to know that two triangles are congruent. The table below explains three such shortcuts.

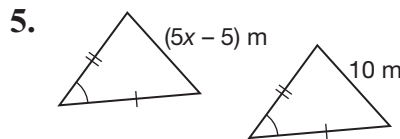
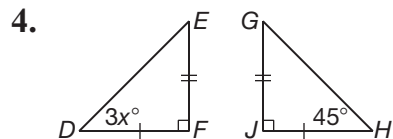
Congruent Triangles	<p>Two triangles are congruent if the following corresponding parts of the triangles are congruent.</p> <ul style="list-style-type: none"> • three sides (side-side-side, or SSS) • two angles and the included side (angle-side-angle, or ASA) • two sides and the included angle (side-angle-side, or SAS) <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>SSS</p> </div> <div style="text-align: center;"> <p>ASA</p> </div> <div style="text-align: center;"> <p>SAS</p> </div> </div>
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PRACTICE

Determine whether each pair of triangles is congruent. If so, write a congruence statement and tell why the triangles are congruent.



Find the value of x in each pair of congruent triangles.



6. **Flags** International code flags are used at sea to signal distress or give warnings. The flag that corresponds to the letter O, shown at the right, warns there is a person overboard. How many congruent triangles are on the flag?



7. **Standardized Test Practice** Which of the following sets of corresponding parts will *not* tell you if two triangles are congruent?

- A** SSA **B** SAS **C** ASA **D** SSS

Answers: 1. yes; $\triangle ABC \cong \triangle XYZ$; SAS 2. no 3. yes; $\triangle QRS \cong \triangle TUV$; SSS 4. 15 5. 3 6. 2 7. A