UNIT 4 • SIMILARITY AND CONGRUENCE   G–CO.8
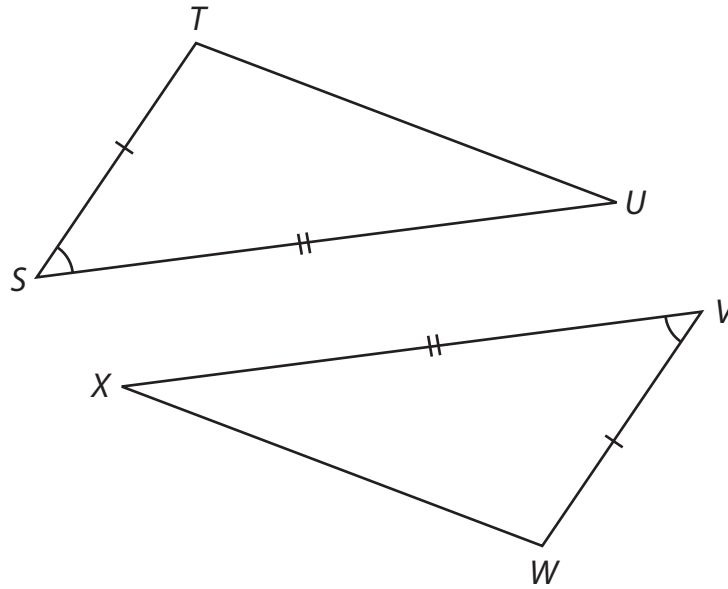## Lesson 4.3: Explaining ASA, SAS, and SSS

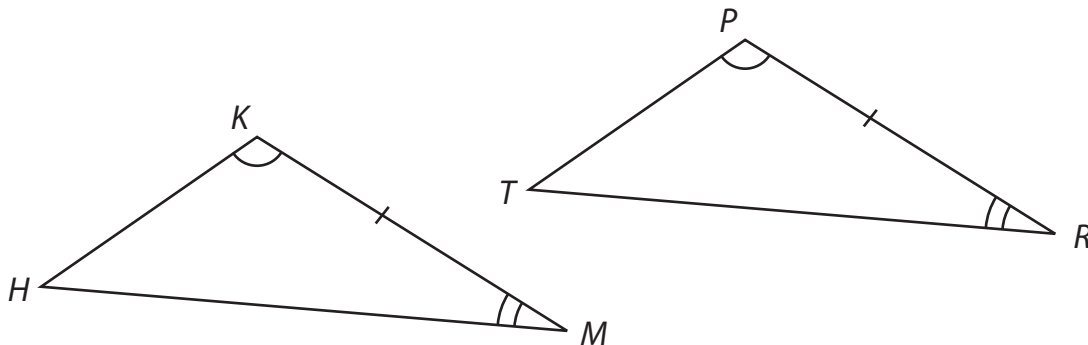### Practice 4.3: Explaining ASA, SAS, and SSS   B

For each diagram, determine which congruence statement can be used to show that the triangles are congruent. If it is not possible to prove triangle congruence, explain why not.

1.

2.

3. Based on the information in the diagram, is $\triangle ABD$ congruent to $\triangle FEC$?

Use the given information to determine which congruence statement can be used to show that the triangles are congruent. If it is not possible to prove triangle congruence, explain why not.
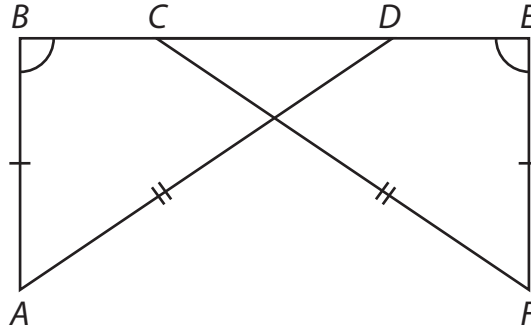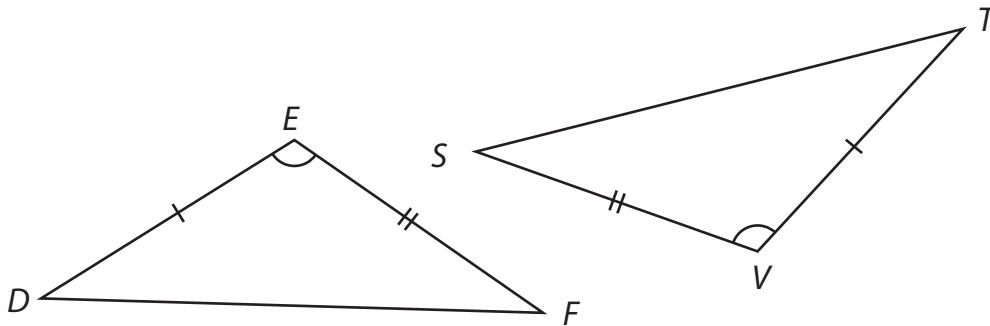
4. $\triangle ABC$ and $\triangle XYZ$: $\angle A \cong \angle X$, $\angle B \cong \angle Y$, and $\overline{AB} \cong \overline{XY}$

5. $\triangle EDF$ and $\triangle GIH$: $\angle F \cong \angle H$, $\overline{ED} \cong \overline{GI}$, and $\overline{EF} \cong \overline{GH}$

6. $\triangle LMN$ and $\triangle PQR$: $\overline{LM} \cong \overline{PQ}$, $\overline{MN} \cong \overline{QR}$, $\overline{LN} \cong \overline{PR}$

7. Nadia is building a model bridge. Based on the information about each truss shown in the diagram below, determine if the triangles are congruent. If so, name the congruent triangles and identify the congruence statement used.
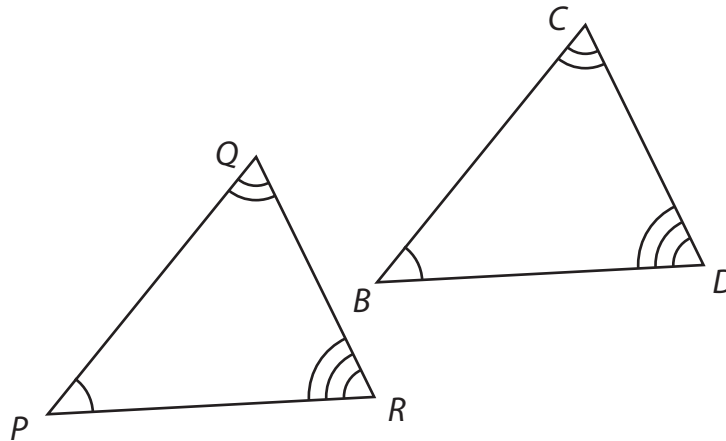
8. Rashid is constructing a bench and needs two congruent sides. He found two pre-cut pieces of wood, shown in the diagram. Based on the information about each angle, determine if the triangles are congruent. If so, name the congruent triangles and identify the congruence statement used.

The diagram below represents a quilt design. Before you cut the fabric, you want to determine if certain triangles are congruent. Use the diagram to solve problems 9 and 10.
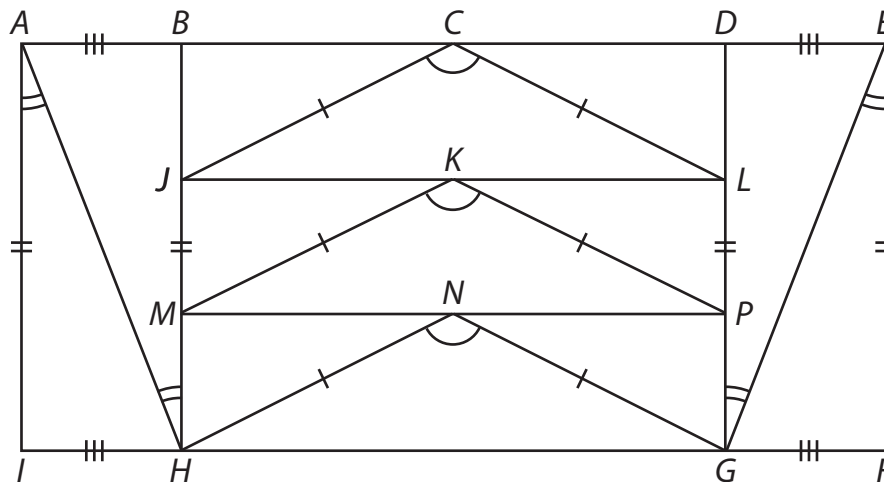
9. Use the information given in the diagram to determine if $\triangle HNG$ and $\triangle JCL$ are congruent. If so, identify the congruence statement used.

10. Use the information given in the diagram to determine if $\triangle AIH$ and $\triangle HBA$ are congruent. If so, identify the congruence statement used.