

NAME _____

Module 8 Points, Lines, Angles, and Triangles

Lesson 5 Congruent Triangles

Lesson Objectives

- Identify congruent triangles and corresponding parts of congruent triangles.
- Model and identify the properties of congruent figures.

Subtopic 1 Congruence

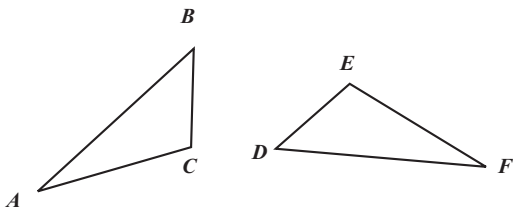
Two figures are congruent if they have the same size and shape.

Congruent Triangles

- Triangles have the same size and shape.
- Corresponding angles and sides are congruent.

1

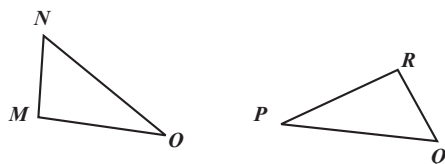
Identify all pairs of corresponding parts in these congruent triangles.



$$\begin{array}{ll} \overline{BC} \cong \overline{DE} & \angle B \cong \angle D \\ \overline{AC} \cong \overline{FE} & \angle C \cong \angle E \\ \overline{AB} \cong \overline{FD} & \angle A \cong \angle F \end{array}$$

2

Given six congruent corresponding parts, determine a congruence statement for the two triangles.



$$\begin{array}{ll} \overline{MN} \cong \overline{QR} & \angle M = \angle Q \\ \overline{NO} \cong \overline{RP} & \angle N = \angle R \\ \overline{MO} \cong \overline{QP} & \angle O = \angle P \end{array}$$

$$\triangle MNO \cong \triangle QRP$$

Subtopic 2 Determining Whether Triangles Are Congruent

Side-Side-Side Congruence

Two triangles have three pairs of congruent corresponding sides.

Side-Angle-Side Congruence

- Two sides congruent
- Included angle congruent

Angle-Side-Angle Congruence

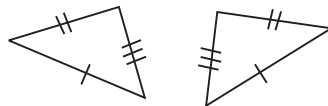
- Two angles congruent
- Included side congruent

3 Are the triangles congruent?



Yes: Angle-Side-Angle Congruence

4 Which rule proves that these triangles are congruent?



Side-Side-Side Congruence