

11-5 Congruent Triangles (Pages 573–577)

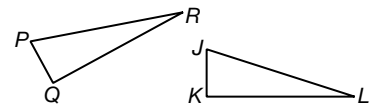
Figures that have the same size and shape are **congruent**. Parts of congruent triangles that match are called **corresponding parts**.

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| Congruent Triangles | <ul style="list-style-type: none"> If two triangles are congruent, their corresponding sides are congruent and their corresponding angles are congruent. When you write that triangle ABC is congruent to (\cong) triangle XYZ, the corresponding vertices are written in order: $\triangle ABC \cong \triangle XYZ$. This means that vertex A corresponds to vertex X, and so on. |
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EXAMPLE

$\triangle PQR \cong \triangle JKL$. Write three congruence statements for corresponding sides.

$\overline{PQ} \cong \overline{JK}$ $\overline{QR} \cong \overline{KL}$ $\overline{RP} \cong \overline{LJ}$

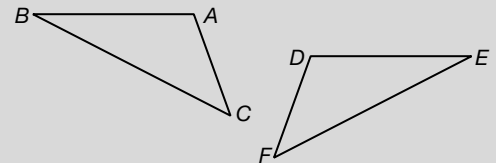


Try This Together

1. Triangle ABC is congruent to triangle DEF .

- Name the congruent angles.
- Name the congruent sides.

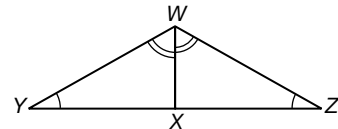
HINT: Start with the shortest side of each triangle.



PRACTICE

2. The two triangles at the right are congruent.

- Name the congruent angles.
- Name the congruent sides.
- Write a congruence statement for the triangles themselves.



3. If $\triangle PQR \cong \triangle DOG$, name the part congruent to each angle or segment given. (Hint: Make a drawing.)

- | | | |
|-----------------|-----------------|---------------|
| a. segment PQ | b. segment PR | c. $\angle O$ |
| d. segment OG | e. $\angle G$ | f. $\angle P$ |



4. **Standardized Test Practice** Which pair of objects best illustrates congruence?

- a 10 oz can and an 8 oz can
- two houses that have the same square footage
- a baseball and softball
- a CD-Rom and a music CD

Answers: 1. a. $\angle A \cong \angle D$; $\angle B \cong \angle E$; $\angle C \cong \angle F$ b. segment $AB \cong$ segment DE ; segment $AC \cong$ segment DF ; segment $BC \cong$ segment EF 2. a. $\angle Y \cong \angle Z$; $\angle WXY \cong \angle WZX$; $\angle WYX \cong \angle WZX$ b. segment $WY \cong$ segment WZ ; segment $WX \cong$ segment WX ; segment $XY \cong$ segment XZ c. $\triangle WXY \cong \triangle WZX$ 3. a. segment DO b. segment DO c. $\angle Q$ d. segment QR e. $\angle R$ f. $\angle D$ 4. D