## 4-2 *Some Ways to Prove Triangles Congruent*

If two triangles are congruent, the six parts of one triangle are congruent to the six corresponding parts of the other triangle. If you are not sure whether two triangles are congruent, however, it is not necessary to compare all six parts. As you saw in Written Exercise 22 of the preceding section, sometimes three pairs of congruent corresponding parts will guarantee that two triangles are congruent. The following postulates give you three ways to show that two triangles are congruent by comparing only three pairs of corresponding parts.

Postulate 12 *SSS Postulate*

If three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent.
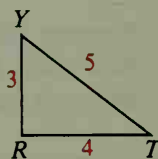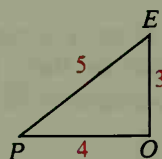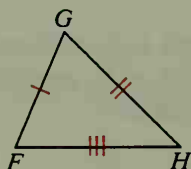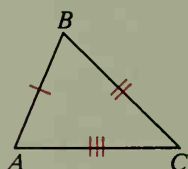
By the SSS Postulate, $\triangle ABC \cong \triangle FGH$ and $\triangle POE \cong \triangle TRY$.
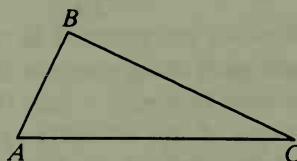
Sometimes it is helpful to describe the parts of a triangle in terms of their relative positions.

$\overline{AB}$ is *opposite* $\angle C$.
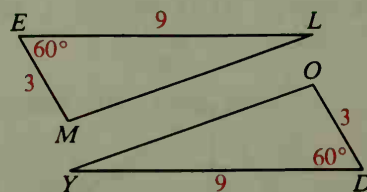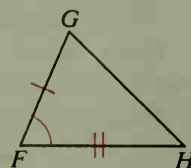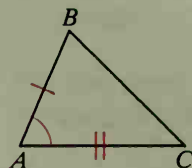$\overline{AB}$ is *included* between $\angle A$ and $\angle B$.
$\angle A$ is *opposite* $\overline{BC}$.
$\angle A$ is *included* between $\overline{AB}$ and $\overline{AC}$.

Postulate 13 *SAS Postulate*

If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the triangles are congruent.

By the SAS Postulate, $\triangle ABC \cong \triangle FGH$ and $\triangle MEL \cong \triangle ODY$.