

Section 4.5 More Congruent Triangles

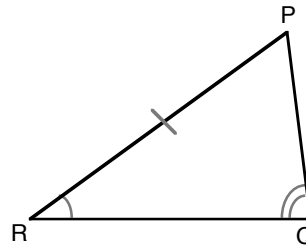
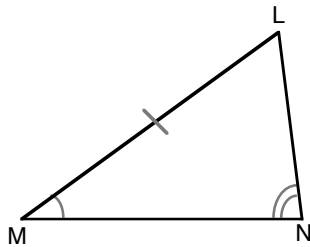
Objective

To Use the AAS Theorem to test triangle congruence, and to solve problems by eliminating the possibilities..

AAS Postulate

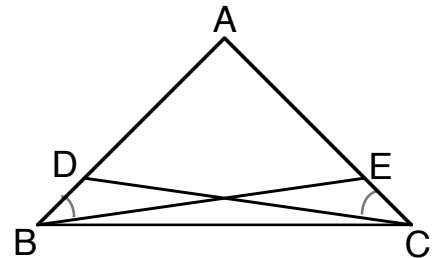
(Angle-Angle-Side)

If two angles and a nonincluded side of one triangle are congruent to the corresponding two angles and side of a second triangle, then the two triangles are congruent.



Example 1

Given: $\overline{AD} \cong \overline{AE}$
 $\angle ACD \cong \angle ABE$
 Prove: $\triangle ABC$ is isosceles

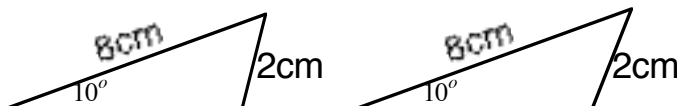


Statements

Reasons

Example 2

Some of the measurements of $\triangle ABC$ and $\triangle DEF$ are given below. Can you determine if the triangles are congruent.



None of the five methods for proving congruence of triangles-CPCTC, SSS, SAS, ASA, or AAS- are applicable. So, you cannot determine if two are congruent.