

| Congruence | Explanation | Diagram |
|------------|---|---------|
| SSS | When two triangles have three corresponding sets of sides congruent, use SSS to say the triangles are congruent. | |
| SAS | When two triangles have two pairs of sides congruent and the angles between them are congruent, use SAS to say the triangles are congruent. | |
| ASA | When two triangles have two pairs of angles congruent and the sides between them are congruent, use ASA to say the triangles are congruent. | |
| AAS | When two triangles have two pairs of angles congruent and the sides not between them are congruent, use AAS to say the triangles are congruent. | |
| HL | When two right triangles have congruent hypotenuses and a pair of congruent legs, use HL to say the triangles are congruent. | |

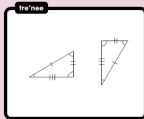
Congruence Theorems Interactive
<http://illuminations.nctm.org/activities.aspx?id=3504>

MOSEY-12.G.CO.8 Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions. (Extend to include HL and AAS.)

Definition: Triangles are congruent if any pair of corresponding sides and their included angles are equal in both triangles.

<http://www.mathopenref.com/congruentsas.html>

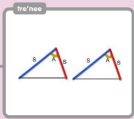
Definition: Triangles are congruent if all three sides in one triangle are congruent to the corresponding sides in the other.



Side-Side-Side

Triangle Congruency

Side-Angle-Side



<http://www.mathopenref.com/congruentsss.html>

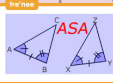
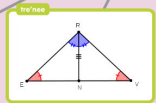
Angle-Angle-Side

Angle-Side-Angle

Hypotenuse-Leg

Definition: Two right triangles are congruent if the hypotenuse and one corresponding leg are equal in both triangles.

Definition: Triangles are congruent if two pairs of corresponding angles and a pair of opposite sides are equal in both triangles.



http://www.mathwarehouse.com/geometry/congruent_triangles/angle-angle-side-postulate.php

<http://www.mathopenref.com/congruentasa.html>

Definition: Triangles are congruent if any two angles and their included side are equal in both triangles.

