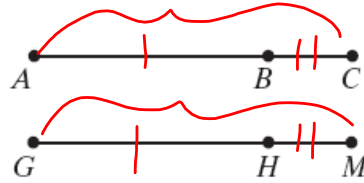


DO NOW

Given: $AB = GH$ and $BC = HM$

Prove: $AC = GM$

**Statements**

1. $AB = GH, BC = HM$
2. $AB + BC = GH + HM$
3. $AB + BC = AC$
 $GH + HM = GM$
4. $AC = GM$

Reasons

1. Given.
2. Addition Axiom
3. The whole is equal to the sum of its parts
4. Substitution postulate.

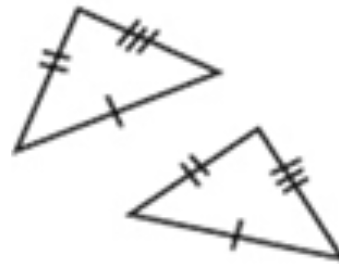
Oct 19-10:08 AM

Methods that Prove Triangles Congruent

SSS

Side-Side-Side

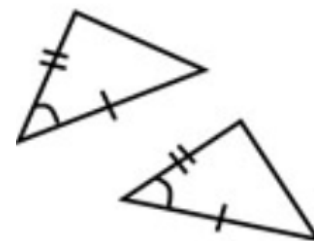
Three sides of a triangle are congruent to three sides of another triangle



SAS

Side-Angle-Side

Two sides and the **included angle** of one triangle are congruent to the same two sides and angle of another triangle

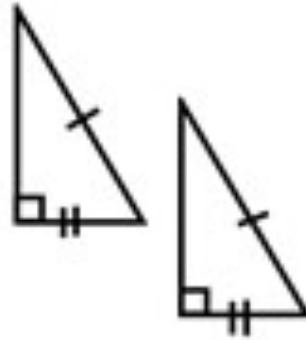


Nov 16-12:43 PM

HL

HYPOTENUSE-LEG

The hypotenuse and leg of one **right triangle** are congruent to the corresponding hypotenuse and leg of another right triangle

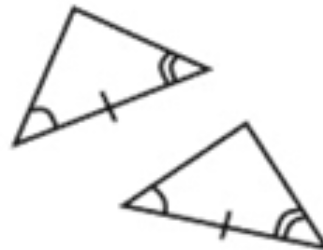


Nov 16-12:46 PM

ASA

ANGLE-SIDE-ANGLE

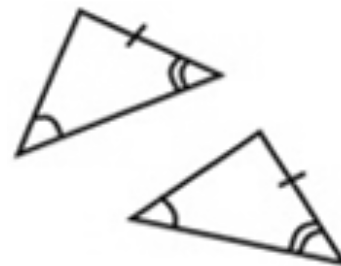
Two angles and the **included side** of one triangle are congruent to the same two angles and side of another triangle



AAS

ANGLE-ANGLE-SIDE

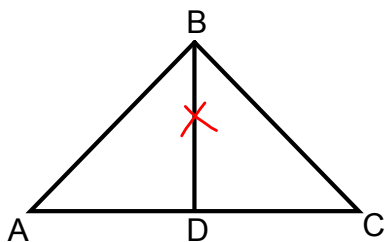
Two angles and the **non-included side** of one triangle are congruent to the same two angles and side of another triangle



Nov 16-12:44 PM

Reflexive Property

A segment (or angle) is congruent to itself

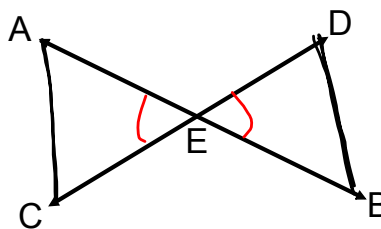


$$\overline{BD} \cong \overline{BD}$$

by reflexive
property

Vertical Angles

When two lines intersect, vertical angles are congruent



$$\angle CEA \cong \angle DEB$$

Vertical \angle 's are \cong

Oct 30-8:27 AM