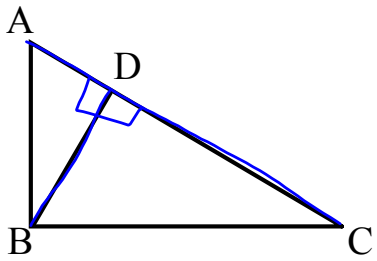
DO NOW

Given: $\overline{BD} \perp \overline{AC}$

Prove: $\angle ADB \cong \angle CDB$



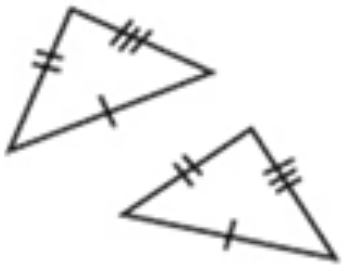
Statements	Reasons
① $\overline{BD} \perp \overline{AC}$	① Given
② $\angle BDA$ and $\angle BDC$ are right $\angle$'s	② $\perp$ lines form right angles
③ $\angle ADB \cong \angle CDB$	③ All right angles are $\cong$

Oct 12-7:16 AM

Methods that **Prove Triangles Congruent**

SSS

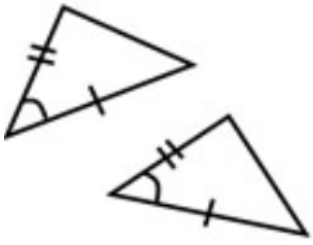
Side-Side-Side



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

SAS

Side-Angle-Side

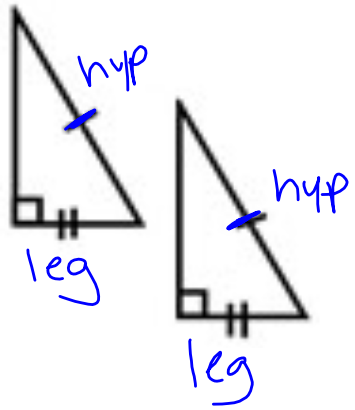


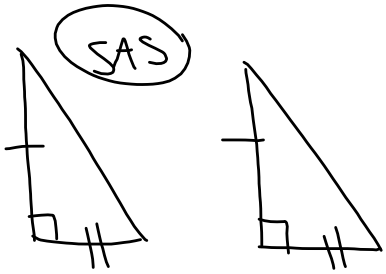
Two sides and the included angle of one triangle are congruent to the same two sides and angle of another triangle

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

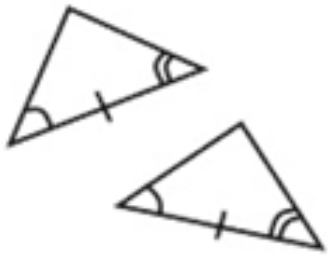




Nov 16-12:46 PM

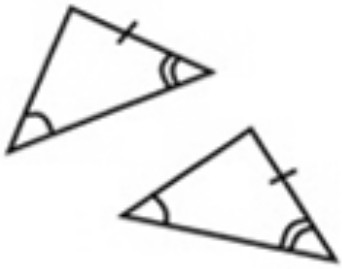
ASA
ANGLE-SIDE-ANGLE

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

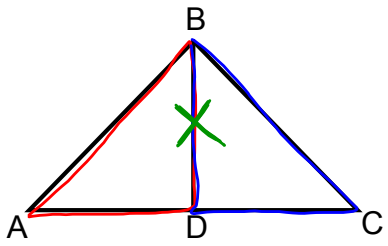
Two angles and the non-included side of one triangle are congruent to the same two angles and side of another triangle



Nov 16-12:44 PM

Reflexive Property

A figure is congruent to itself when it is shared by two triangles



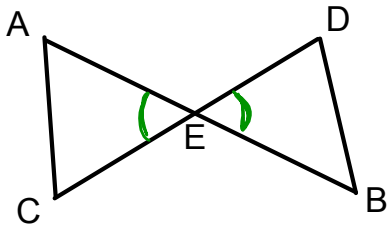
$\overline{BD}$ is in both $\triangle$'s

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

by reflexive property

Vertical Angles

When two lines intersect, vertical angles are congruent



$\angle AEC \cong \angle BED$

because vertical $\angle$'s are congruent!

Oct 30-8:27 AM