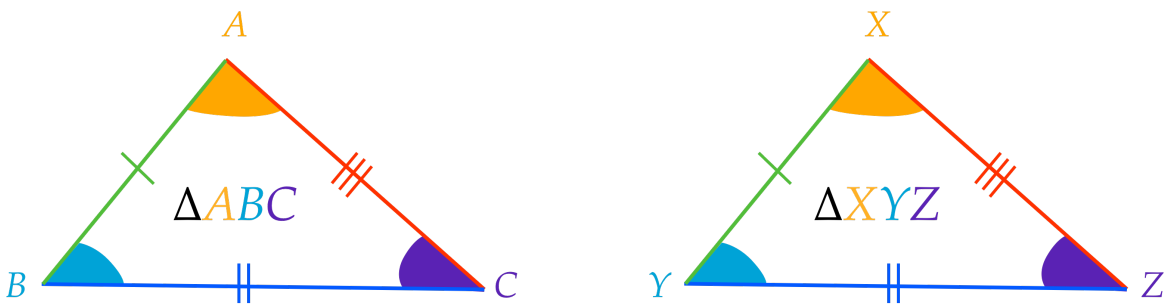
Leg-Leg (LL) Theorem with Right Triangles

Name ______________________

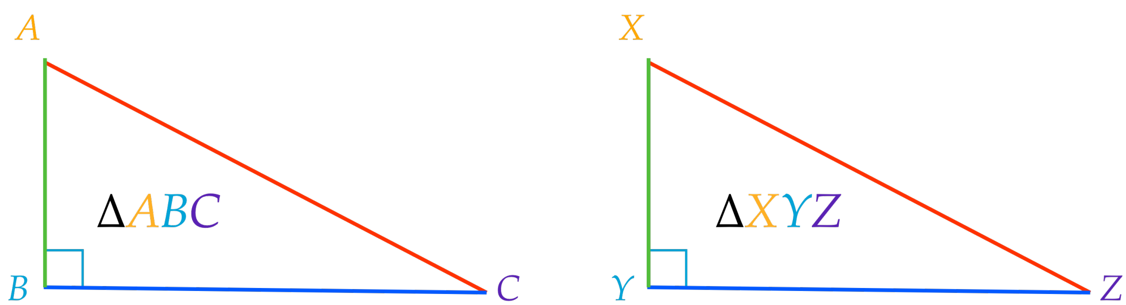
Date ____________ Period ____

Two triangles are congruent if and only if
their corresponding angles and sides are congruent.

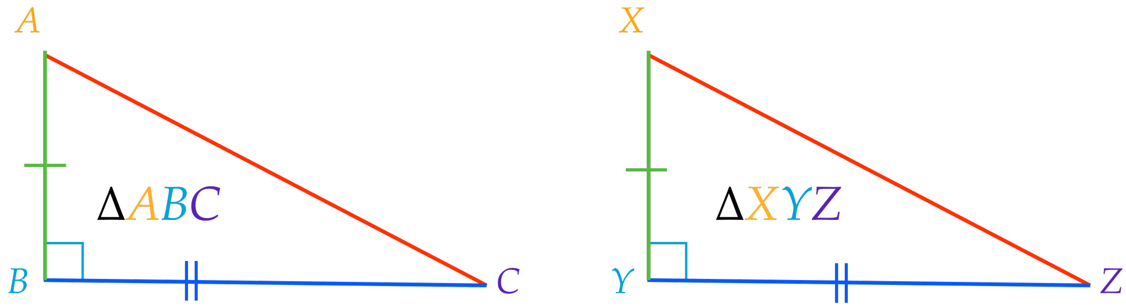


If $\angle A \cong \angle X$, $\angle B \cong \angle Y$, $\angle C \cong \angle Z$ and $\overline{AB} \cong \overline{XY}$, $\overline{BC} \cong \overline{YZ}$, $\overline{AC} \cong \overline{XZ}$ then $\Delta ABC \cong \Delta XYZ$

The hypotenuse of a right triangle is the side opposite the right angle.
The other two sides of a right triangle are called legs.



If the legs of one right triangle are congruent to the legs of another right triangle, then the triangles are congruent.



If $\overline{AB} \cong \overline{XY}$, and $\overline{BC} \cong \overline{YZ}$, then $\Delta ABC \cong \Delta XYZ$

Only with Right Triangles - Leg - Leg

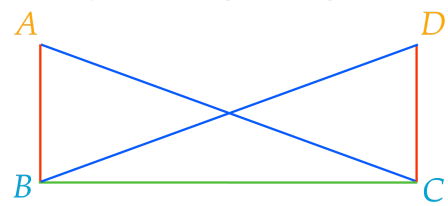
Statements	Reasons

Given: $\overline{AB} \perp \overline{BC}$

$\overline{DC} \perp \overline{BC}$

$\overline{AB} \cong \overline{DC}$

Prove: $\Delta ABC \cong \Delta DCB$

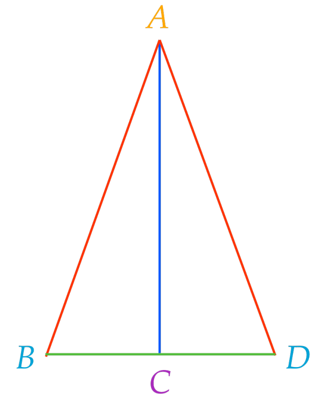


Statements	Reasons

Given: C is midpoint of $\overline{BD}$

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

Prove: $\overline{AB} \cong \overline{AD}$



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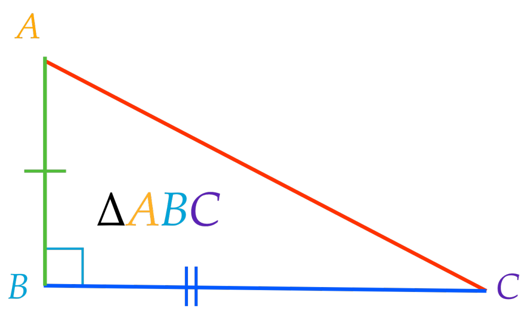

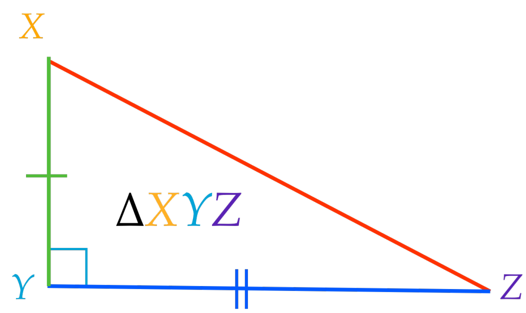

If $\overline{AB} \cong \overline{XY}$, and $\overline{BC} \cong \overline{YZ}$, then $\Delta ABC \cong \Delta XYZ$

Only with Right Triangles - Leg - Leg (LL)