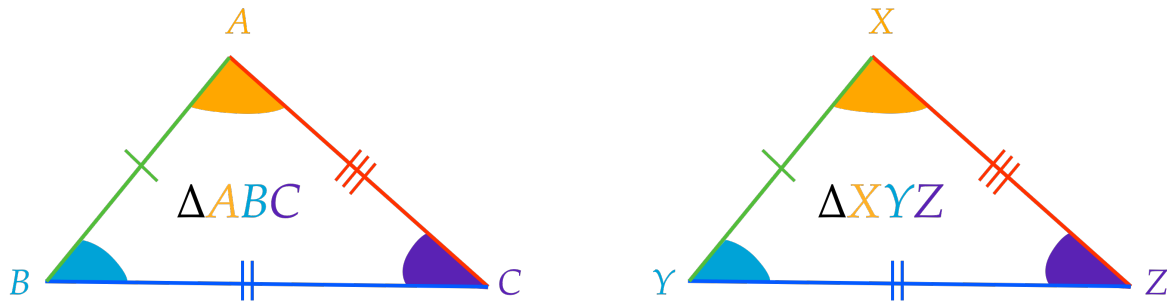
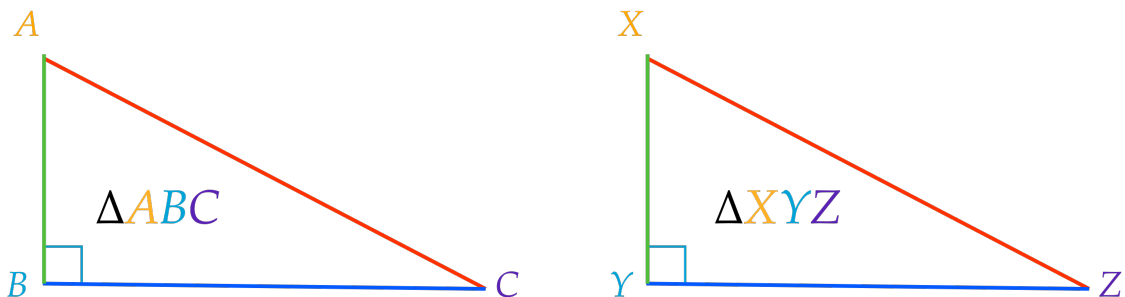


Two triangles are congruent if and only if their corresponding angles and sides are congruent.

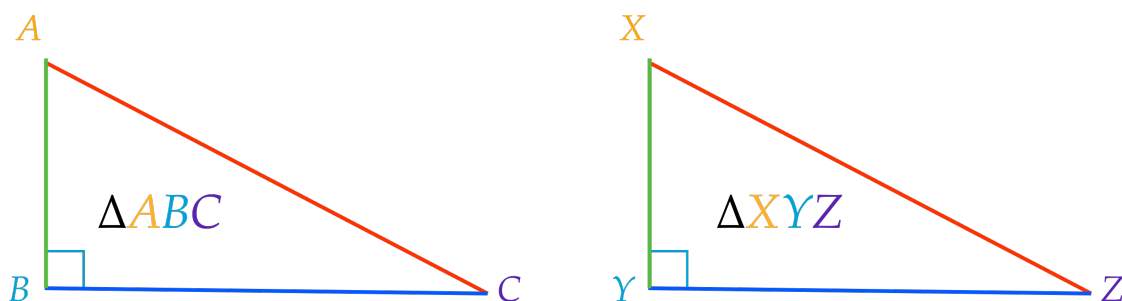


$$\begin{array}{l} \angle A \cong \angle X \\ \text{If } \angle B \cong \angle Y \text{ and } \angle C \cong \angle Z \\ \overline{AB} \cong \overline{XY} \\ \overline{BC} \cong \overline{YZ} \\ \overline{AC} \cong \overline{XZ} \end{array} \text{ then } \triangle ABC \cong \triangle XYZ$$

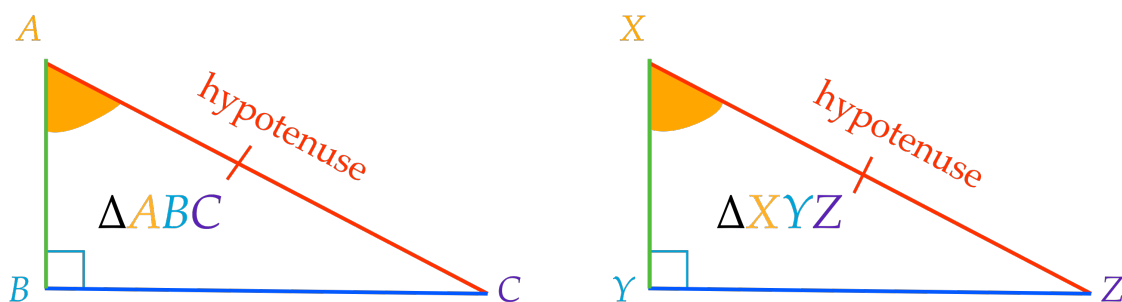
The right angle of a right triangle is the angle with measure equal to 90°
The other two angles are acute angles of a right triangle.



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



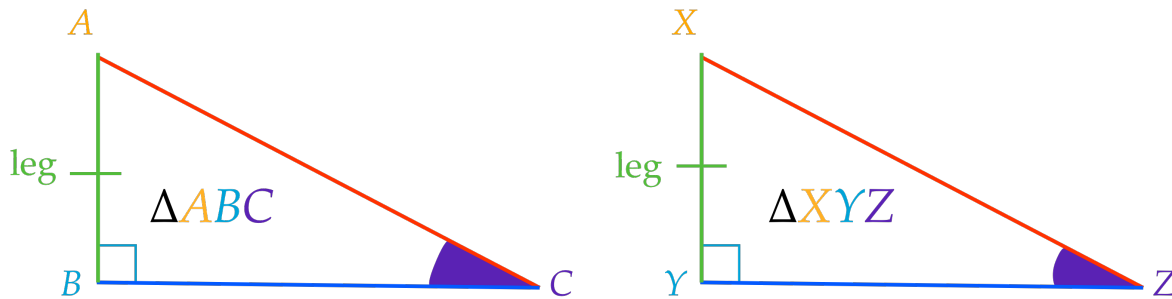
If the hypotenuse and an acute angle of one right triangle are congruent to the hypotenuse and acute angle of another right triangle, then the triangles are congruent.



If $\overline{AC} \cong \overline{XZ}$, and $\angle A \cong \angle X$, then $\Delta ABC \cong \Delta XYZ$

Only with Right Triangles - Hypotenuse - Acute Angle (HA)

If a leg and an acute angle of one right triangle are congruent to the corresponding leg and acute angle of another right triangle, then the triangles are congruent.



If $\overline{AB} \cong \overline{XY}$, and $\angle C \cong \angle Z$, then $\Delta ABC \cong \Delta XYZ$

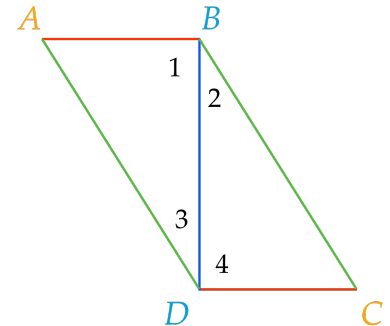
Only with Right Triangles - Leg - Acute Angle (LA)

Statements	Reasons
	<p>Given: $\angle ADC$ is a right angle</p> <p>$\angle ABC$ is a right angle</p> <p>\overline{CA} bisects $\angle DCB$</p> <p>Prove: $\overline{DC} \cong \overline{BC}$</p>

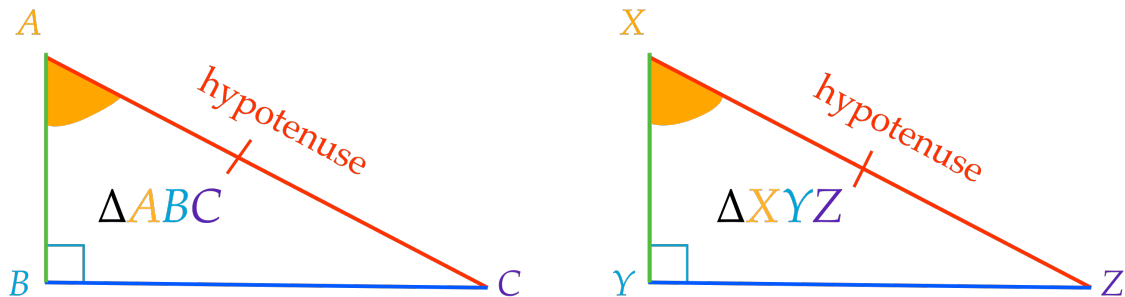
Statements	Reasons

Given: $\overline{BD} \perp \overline{AC}$
 $\overline{AB} \parallel \overline{DC}$
 $\overline{AD} \parallel \overline{BC}$

Prove: $\triangle ABD \cong \triangle CDB$



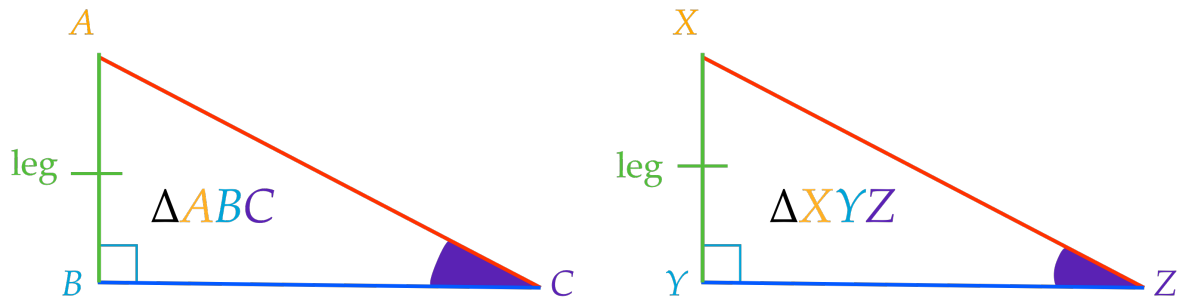
If the hypotenuse and an acute angle of one right triangle are congruent to the hypotenuse and acute angle of another right triangle, then the triangles are congruent.



If $\overline{AC} \cong \overline{XZ}$, and $\angle A \cong \angle X$, then $\triangle ABC \cong \triangle XYZ$

Only with Right Triangles - Hypotenuse - Acute Angle (HA)

If a leg and an acute angle of one right triangle are congruent to the corresponding leg and acute angle of another right triangle, then the triangles are congruent.



If $\overline{AB} \cong \overline{XY}$, and $\angle C \cong \angle Z$, then $\Delta ABC \cong \Delta XYZ$

Only with Right Triangles - Leg - Acute Angle (LA)