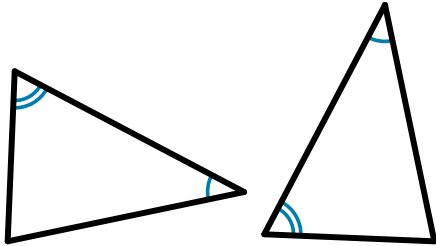
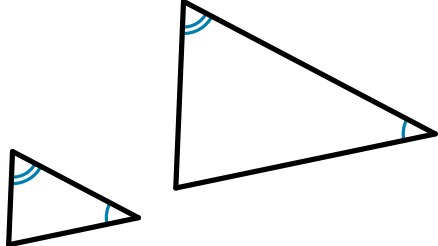
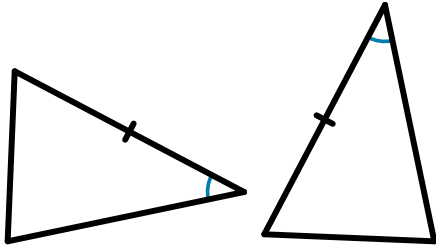


Angle-Angle (AA) Similarity Theorem

Examples & Non-Examples

Example	Example	Non-Example
		

Definition

The **Angle-Angle (AA) Similarity Theorem** states that **if two angles in one triangle are congruent to two angles in another triangle, then the triangles are similar.**

Explanation:

Since the angles match, the triangles have the same shape, even if they are different sizes. The third angle will also be congruent, and the corresponding side lengths will be proportional.

Example:

Suppose in $\triangle ABC$ and $\triangle DEF$:

- $\angle A \cong \angle D$
- $\angle B \cong \angle E$

Then, by the **AA Similarity Theorem**, $\triangle ABC \sim \triangle DEF$. This means:

- $\angle C \cong \angle F$
- Corresponding side lengths are proportional

For example:

$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$$

The triangles are **similar**, not necessarily congruent, because they may be different sizes.

