2 Triangles are **CONGRUENT** if they have:
Corresponding SIDES congruent (same length)
Corresponding ANGLES congruent (same degree measure)

**We don’t have to know all 3 sides and all 3 angles...just 3 out of the 6 is enough**

Congruent polygons have the EXACT same size and shape. They may slide, flip, or turn to fit exactly on top of the other one.
There are 5 methods to prove triangles congruent:

• SSS
• SAS
• ASA
• AAS
• HL
SSS Postulate

The Side Side Side postulate (often abbreviated as SSS) states that if three sides of one triangle are congruent to three sides of another triangle, then these two triangles are congruent.

EX:
SAS Postulate

• The Side Angle Side postulate (often abbreviated as SAS) states that if two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then these two triangles are congruent.

• EX:
ASA Postulate

• The Angle Side Angle postulate (often abbreviated as ASA) states that if two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then these two triangles are congruent.

• EX:
AAS

• The **AAS Theorem**. The **angle-angle-side Theorem**, or **AAS**, tells us that if two angles and any side of one triangle are congruent to two angles and any side of another triangle, then the triangles are congruent.


• EX:
HL Theorem

• And then there's the hypotenuse leg theorem, or HL theorem. This theorem states that 'if the hypotenuse and one leg of a right triangle are congruent to the hypotenuse and one leg of another right triangle, then the triangle are congruent.'

• http://study.com/academy/lesson/the-hl-theorem.html

• EX: