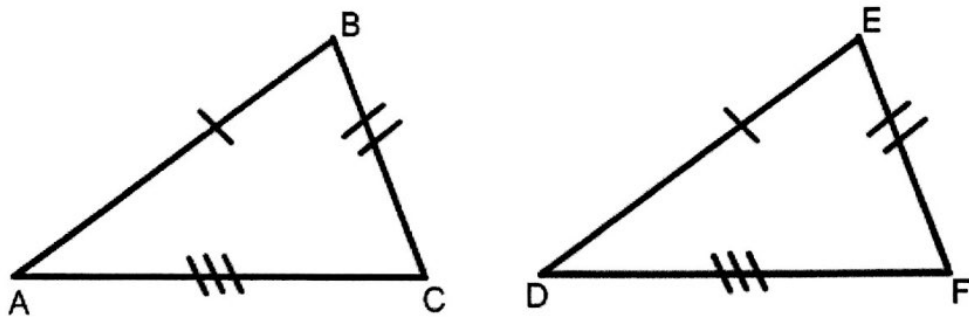
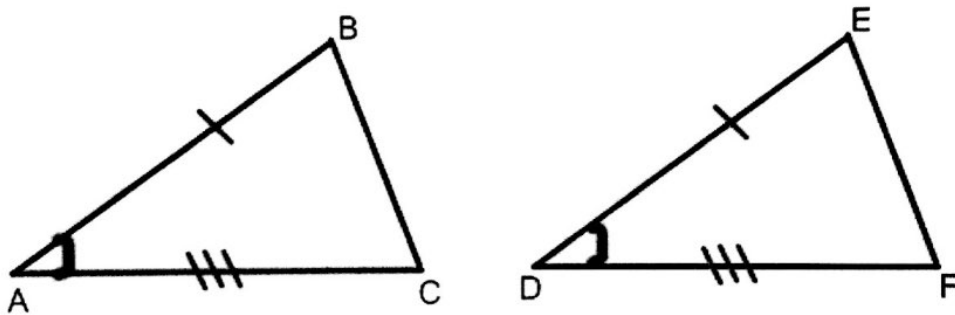


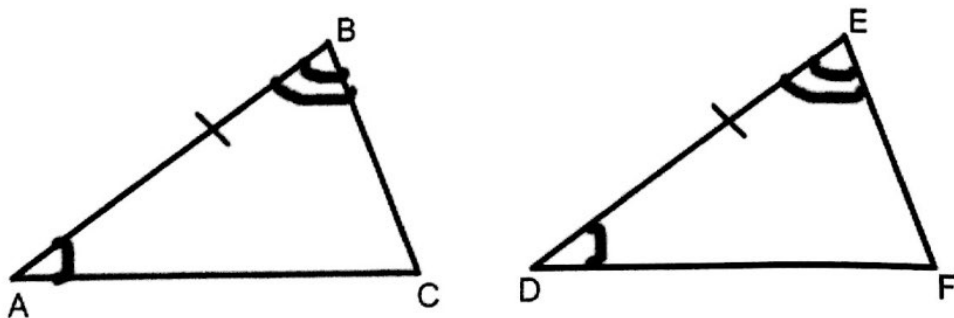
SSS (Side, Side, Side)



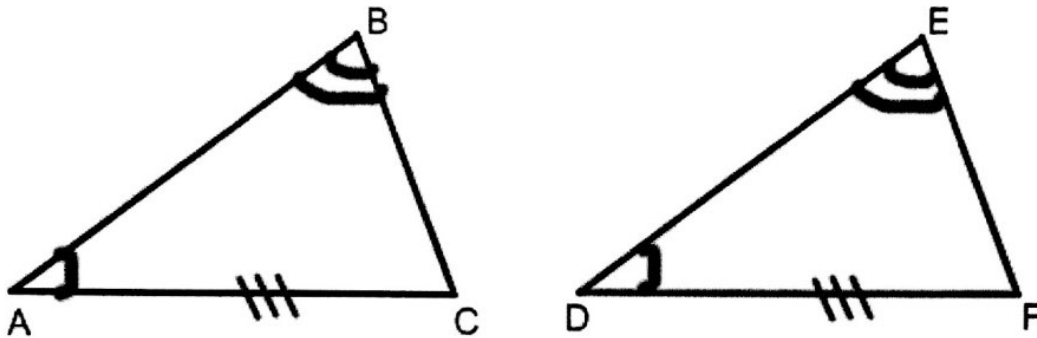
SAS (Side, Angle, Side)



ASA (Angle, Side, Angle)



AAS (Angle, Angle, Side)



Note: We can NOT prove triangles with AAA or SSA!!

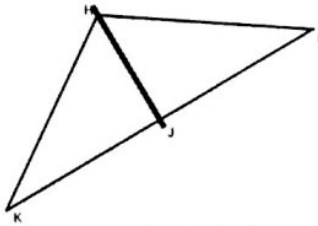
How to set up a proof:

Statement	Reason
	Intro: List the givens
	Body: Properties & Theorems
	Conclusion: What you are proving

9 Most Common Properties, Definitions & Theorems for Triangles

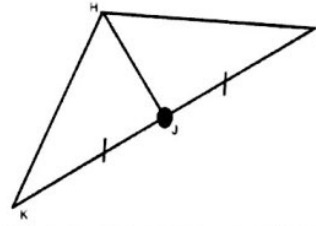
1. Reflexive Property: $AB = BA$

When the triangles have an angle or side in common



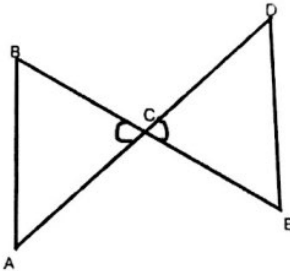
6. Definition of a Midpoint

Results in two segments being congruent



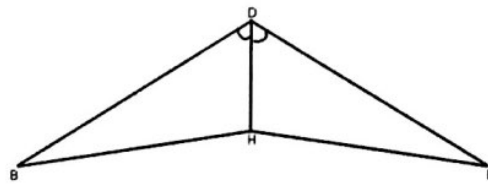
2. Vertical Angles are Congruent

When two lines are intersecting



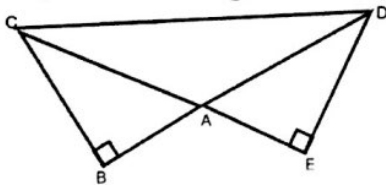
7. Definition of an angle bisector

Results in two angles being congruent



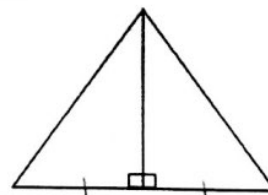
3. Right Angles are Congruent

When you are given right triangles and/or a square/ rectangle



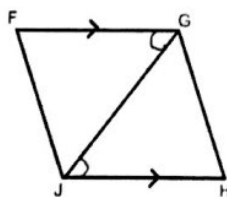
8. Definition of a perpendicular bisector

Results in 2 congruent segments and right angles.



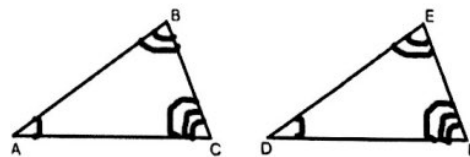
4. Alternate Interior Angles of Parallel Lines are congruent

When the givens inform you that two lines are parallel



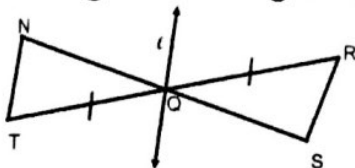
9. 3rd angle theorem

If 2 angles of a triangle are \cong to 2 angles of another triangle, then the 3rd angles are \cong



5. Definition of a segment bisector

Results in 2 segments being congruent



Note: DO NOT ASSUME ANYTHING IF IT IS NOT IN THE GIVEN