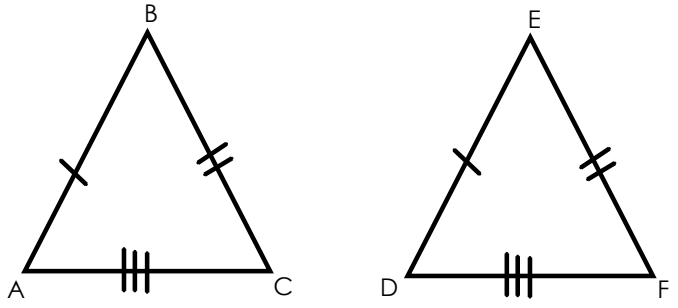
2.2 SSS and SAS Congruence

Objective: Students will be able to prove congruence using SSS and SAS

Congruence Shortcuts

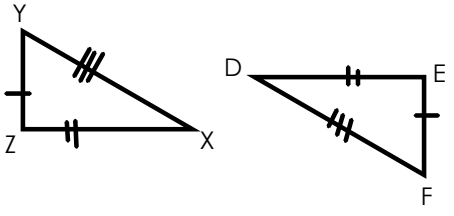
If two triangles are congruent it means that all corresponding angle pairs and all corresponding sides are congruent. However, in order to be sure that two triangles are congruent, **you do not need to know that all angle pairs and side pairs are congruent.**

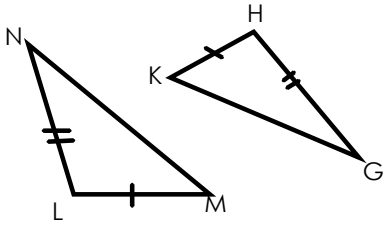


Side - Side - Side Congruent (SAS)

If two triangles have three pairs of congruent sides, then the triangles are congruent.

Determine if the following triangles are congruent. State the postulate used to determine congruence.





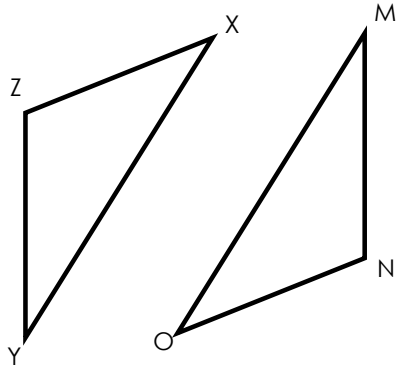
Writing Two - Column Proofs

Given: ZX ≅ NO

ZY ≅ MN

YX ≅ MO

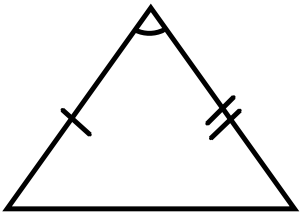
Prove: △XYZ ≅ △ONM

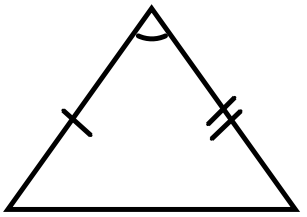


Statement	Reason

Side Angle Side Congruence (SAS)

If two triangles have two pairs of congruent sides and the included angle in one triangle is congruent to the included angle in the other triangle, then the triangles are congruent.



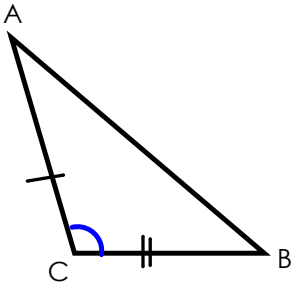


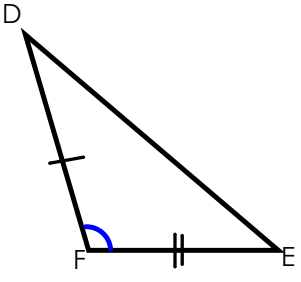
Two congruent side with the ANGLE IN THE MIDDLE.

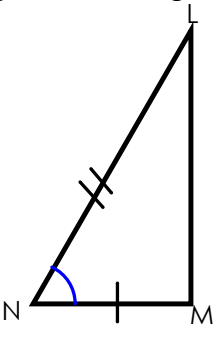
Pro Tip

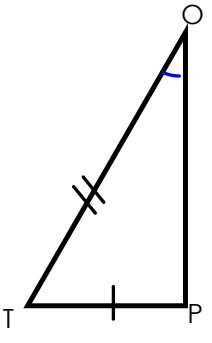
Use a highlighter to help see if the angle is in the middle.

Determine if the the following triangles are congruent



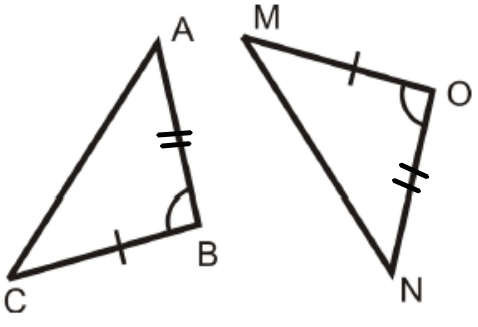






Writing Two - Column Proofs

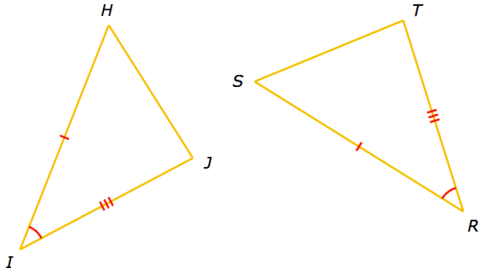
Prove: △ABC ≅ △NOM



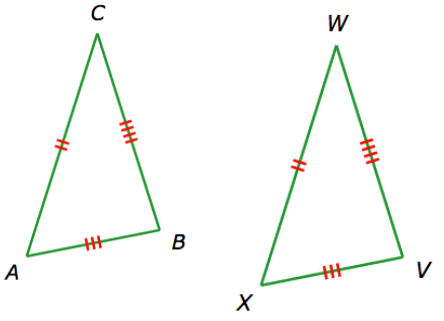
Statement	Reason

Independent Practice

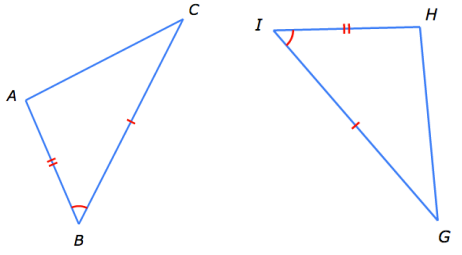
Determine if the following triangles are congruent



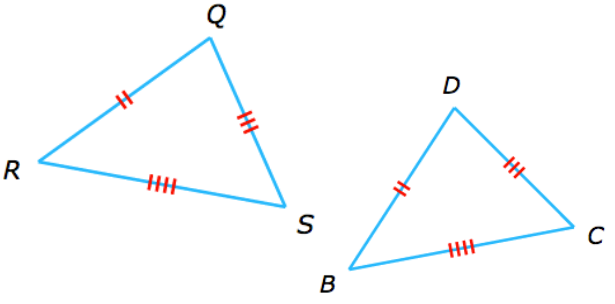
_____ because _____



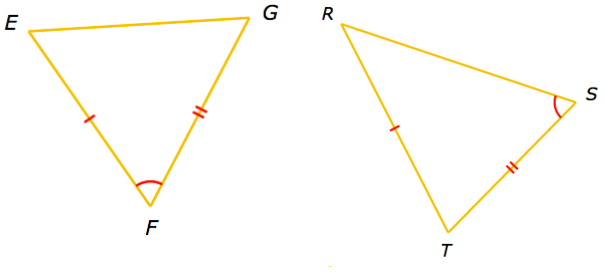
_____ because _____



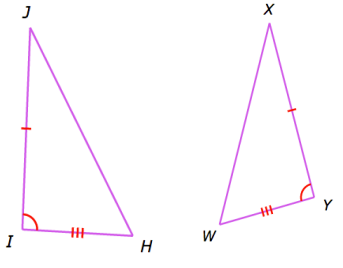
_____ because _____



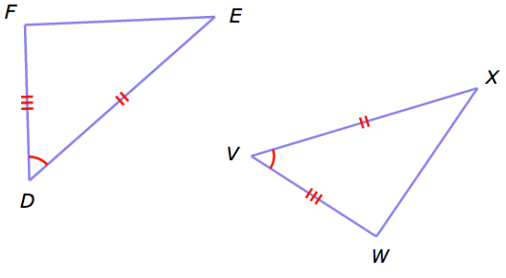
_____ because _____



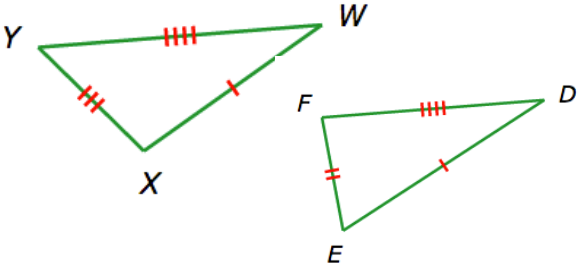
_____ because _____



_____ because _____

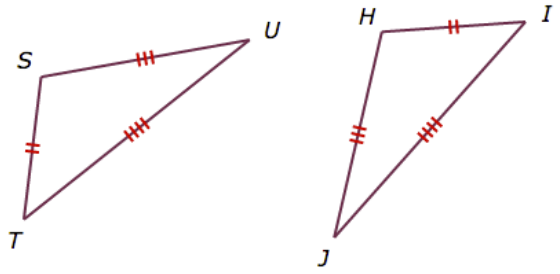


_____ because _____



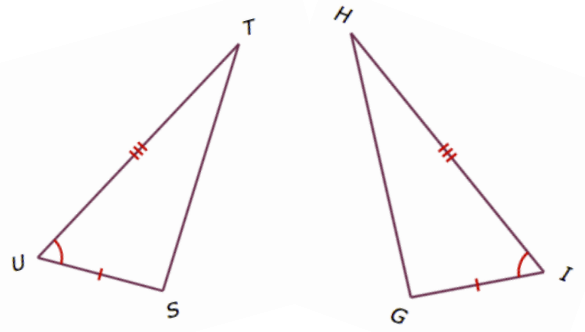
_____ because _____

Prove: △UST ≅ △JHI



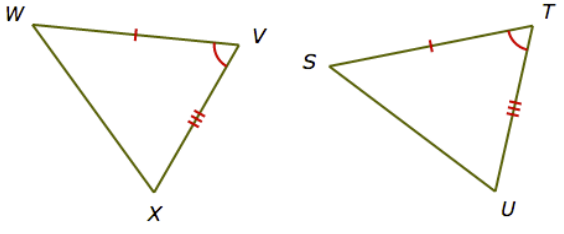
Statement	Reason

Prove: △UST ≅ △IGH



Statement	Reason

Prove: △WVX ≅ △STU



Prove: △HIJ ≅ △YXW