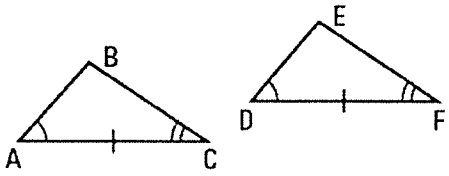
Day 6 / Notes

Name: _____ Date: _____ Block: _____

Prove Triangles Congruent by ASA and AAS

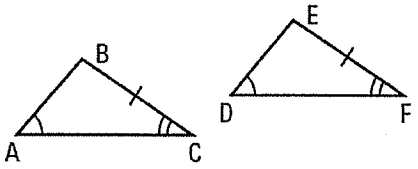
Angle-Side-Angle (ASA) Congruence Postulate

If two angles and the included side of one triangle are congruent to two angles and the included side of a second triangle, then the two triangles are congruent.



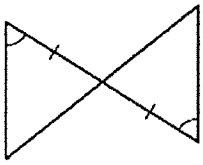
Angle-Angle-Side (AAS) Congruence Theorem

If two angles and a non-included side of one triangle are congruent to two angles and the corresponding non-included side of a second triangle, then the two triangles are congruent.



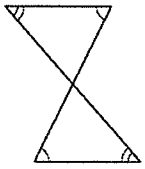
Examples: Can the triangles be proven congruent with the information given in the diagram? If so, state the postulate or theorem you would use.

a)



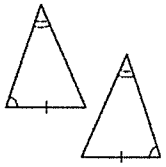
Congruent? _____
Why or why not?_____

b)



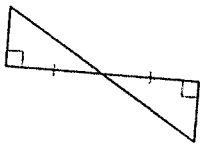
Congruent? _____
Why or why not?_____

c)



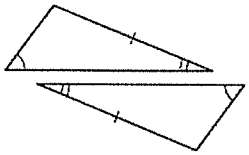
Congruent? _____
Why or why not?_____

d)



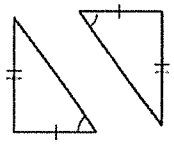
Congruent? _____
Why or why not?_____

e)



Congruent? _____
Why or why not?_____

f)



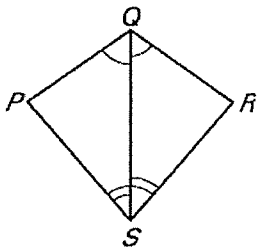
Congruent? _____
Why or why not?_____

Example Proofs:

Given: $\angle PQS \cong \angle RQS$

$\angle QSP \cong \angle QSR$

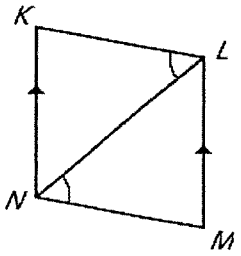
Prove: $\Delta PQS \cong \Delta RQS$



Given: $\angle KLN \cong \angle MNL$

[redacted] $\angle K \cong \angle M$

Prove: $\Delta KLN \cong \Delta MNL$



You Try: Complete the proof...

Given: $\angle S \cong \angle V$; $\overline{RS} \cong \overline{UV}$

Prove: $\Delta RST \cong \Delta UVT$