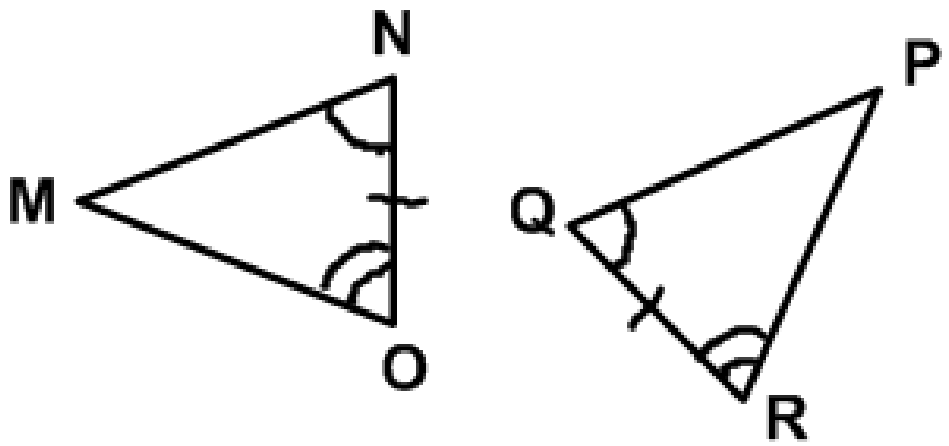
4 - 5
Proving Congruence (ASA, AAS)

included side: side between two given angles

Angle-Side-Angle Postulate (ASA):

2 ∠s and included side of one △
≅ 2 ∠s and included side of another
△, then △s are ≅

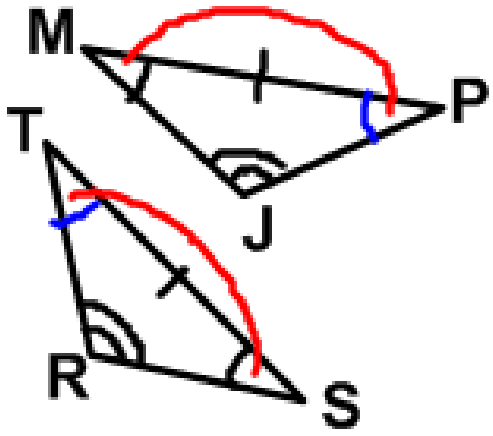


Proof:

Given: $\angle M \cong \angle S$, $\angle J \cong \angle R$

$\overline{MP} \cong \overline{ST}$

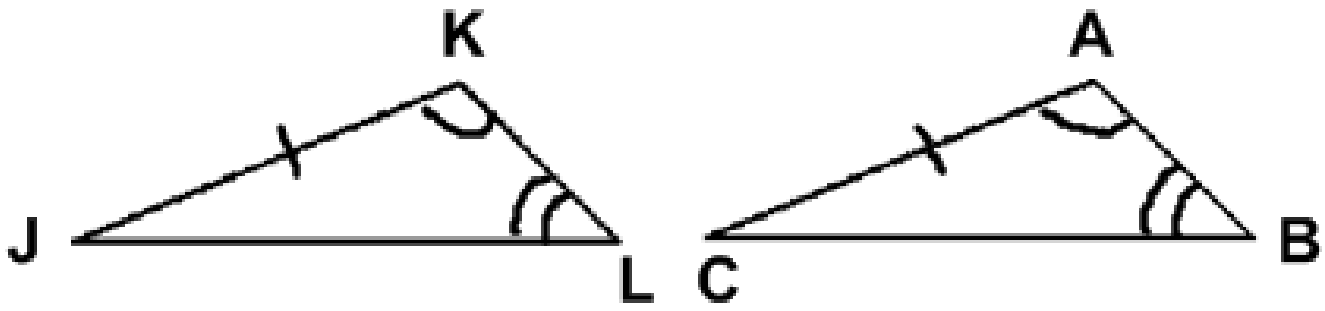
Prove: $\triangle JMP \cong \triangle RST$



Statements	Reasons
1. $\angle M \cong \angle S$, $\angle J \cong \angle R$, $\overline{MP} \cong \overline{ST}$	1. Given
2. $\angle T \cong \angle P$	2. Third Angle Thm.
3. $\triangle JMP \cong \triangle RST$	3. ASA

Angle-Angle-Side Postulate (AAS):

2 ∠s and a nonincluded side in one △ ≅ 2 ∠s and a nonincluded side in another △, then △s are ≅

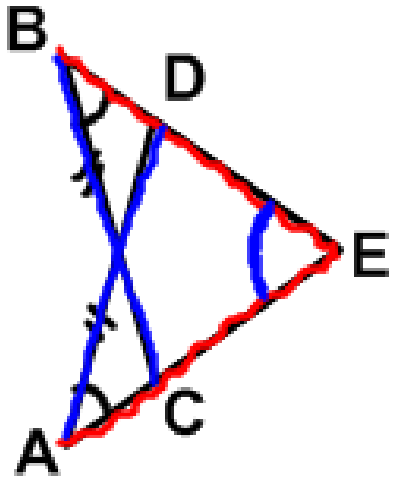


Proof:

Given: $\angle EAD \cong \angle EBC$

$\overline{AD} \cong \overline{BC}$

Prove: $\overline{AE} \cong \overline{BE}$



Statements	Reasons
1. $\angle EAD \cong \angle EBC$ $\overline{AD} \cong \overline{BC}$	1. Given
2. $\angle E \cong \angle E$	2. Reflexive
3. $\triangle AED \cong \triangle BEC$	3. AAS
4. $\overline{AE} \cong \overline{BE}$	4. CPCTC