Geometry CP
CPCTC

Recall:

Definition of Congruent Triangles:

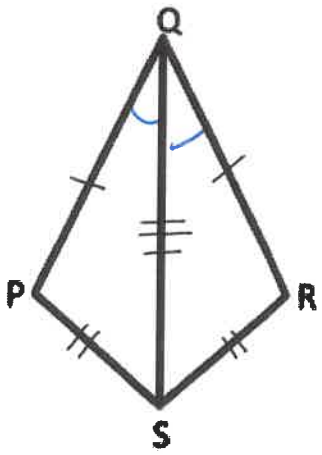
Two triangles are congruent if there is a correspondence between their angles and their sides such that corresponding angles and corresponding sides are congruent

CPCTC: Corresponding Parts of congruent Triangles are congruent

1.

Given: $\overline{PQ} \cong \overline{RQ}$
$\overline{PS} \cong \overline{RS}$

Prove: $\angle PQS \cong \angle RQS$

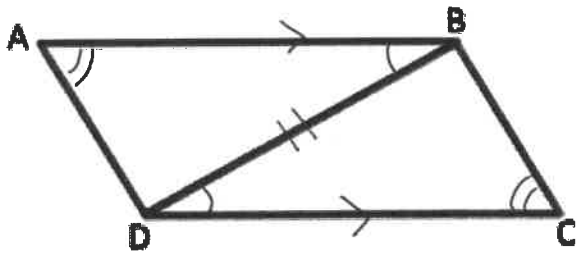


Statements	Reasons
1) $\overline{PQ} \cong \overline{RQ}$ $\overline{PS} \cong \overline{RS}$	1) Given
2) $\overline{QS} \cong \overline{QS}$	2) Reflexive
3) $\triangle PQS \cong \triangle RQS$	3) SSS
4) $\angle PQS \cong \angle RQS$	4) CPCTC

★ congruent Δ's so all corresponding parts are congruent

2. Given: $\overline{AB} \parallel \overline{CD}$
$\angle A \cong \angle C$

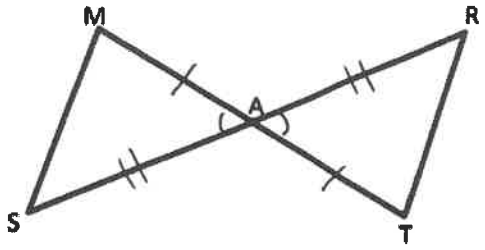
Prove $\overline{AD} \cong \overline{CB}$



Statements	Reasons
1) $\overline{AB} \parallel \overline{CD}$	1) Given
2) $\angle ABD \cong \angle CDB$	2) Alt Int $\angle$s Thm
3) $\angle A \cong \angle C$	3) Given
4) $\overline{BD} \cong \overline{DB}$	4) Symmetric
5) $\triangle ABD \cong \triangle CDB$	5) AAS
6) $\overline{AD} \cong \overline{CB}$	6) CPCTC

3. Given: A is the midpoint of $\overline{MT}$
A is the midpoint of $\overline{SR}$

Prove: $\overline{MS} \cong \overline{TR}$



Statements	Reasons
1) A is the midpoint of $\overline{MT}$	1) Given
2) $\overline{MA} \cong \overline{TA}$	2) Def of midpoint
3) A is the midpoint of $\overline{SR}$	3) Given
4) $\overline{SA} \cong \overline{RA}$	4) Def of midpoint
5) $\angle MAS \cong \angle TAR$	5) Vertical Angles
6) $\triangle MAS \cong \triangle TAR$	6) SAS
7) $\overline{MS} \cong \overline{TR}$	7) CPCTC