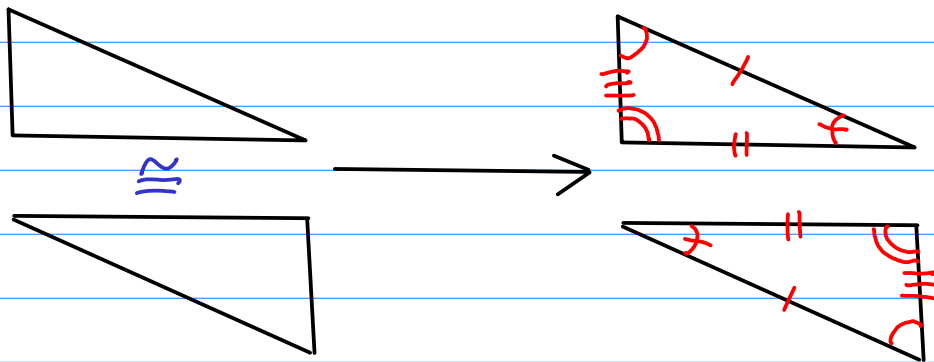


§4.6: CPCTC

* Def'n of $\cong \Delta$'s: If 2 Δ 's are \cong , then their

CORRESPONDING PARTS are \cong .

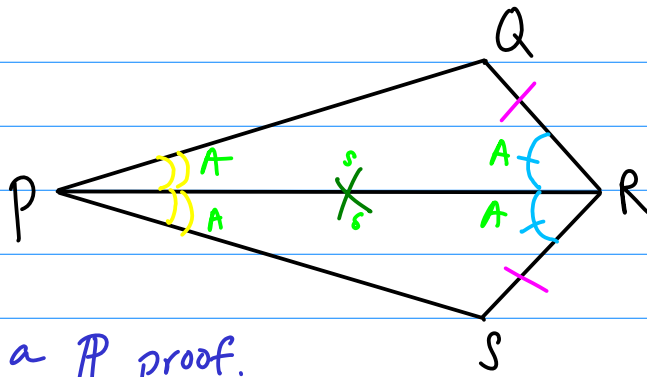
Sides \swarrow
 \searrow \sphericalangle 's



* CPCTC:

- Corresponding
- Parts of
- Congruent (\cong)
- Triangles are (Δ 's)
- Congruent (\cong)

Ex:



Write a \mathbb{P} proof.

Given:

\overline{RP} bisects $\sphericalangle QRS$ & $\sphericalangle QRS$.

Prove: $\overline{RQ} \cong \overline{RS}$

Since \overline{RP} bisects $\sphericalangle QRS$, $\sphericalangle QRP \cong \sphericalangle SRP$

① by def'n of \sphericalangle bisector. Similarly,
 $\sphericalangle QPR \cong \sphericalangle SPR$. By the Reflexive
Prop., $\overline{PR} \cong \overline{PR}$. $\triangle PRQ \cong \triangle PRS$

② by ASA. Thus, $\overline{RQ} \cong \overline{RS}$ by CPCTC. \square

STEPS:

① Show \cong parts of
2 Δ 's

(Vert \sphericalangle 's, reflexive,
Givens, alt. int. \sphericalangle 's...)

② Show 2 $\cong \Delta$'s

③ Use CPCTC