

Lesson Title 5.7 Using Congruent Triangles Notes

HGEO

Date _____

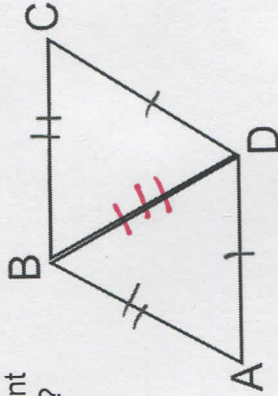
The goal of proving triangles congruent is to find the three items we can prove congruent in order to use one of these: SSS, SAS, AAS, ASA, HL.

Once we have two triangles are congruent, then we can use CPCTC to prove all the other parts of the triangle congruent.

CPCTC stands for Corresponding Parts of Congruent Triangles are Congruent.

TASK 1: Proving Angles Congruent
How can $\angle A$ & $\angle C$ be congruent?

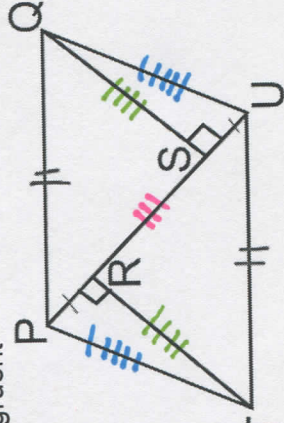
- Plan ←
1. $\overline{BD} \cong \overline{BD}$ by Reflexive POC
 2. $\triangle ABD \cong \triangle CBD$ by SSS
 3. $\angle A \cong \angle C$ by CPCTC



TASK 2: Proving Triangles Congruent
 $\triangle PTU \cong \triangle UQP$

Given: $\overline{PR} \cong \overline{SU}$
 $\overline{TU} \cong \overline{PQ}$
 $\angle PRT$ & $\angle QSU$ are right \angle 's

Prove: $\triangle PTU \cong \triangle UQP$



- 1) $\overline{RS} \cong \overline{RS}$ by Reflexive POC
 - 2) $\triangle TRU \cong \triangle QSP$ by HL
 - 3) $\overline{TR} \cong \overline{QS}$ by CPCTC
 - 4) $\triangle TRP \cong \triangle QSU$ by SAS
 - 5) $\overline{PT} \cong \overline{QU}$ by CPCTC
- $\therefore \triangle PTU \cong \triangle UQP$

Still need help with: