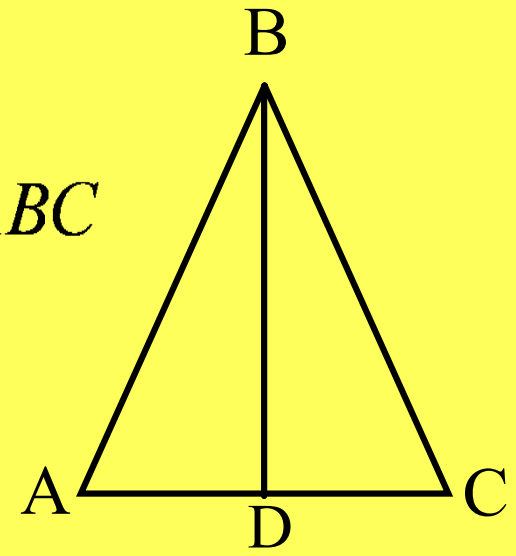
DO NOW!!!!!!!!

Given: $\angle A \cong \angle C$; $\overline{BD}$ bisects $\angle ABC$

Prove: $\Delta ABD \cong \Delta CBD$



Statement	Reason
1. $\angle A \cong \angle C$; $\overline{BD}$ bisects $\angle ABC$	1. Given

Geometry

Ch. 4 Handout 4.4

Using Congruent Triangles: CPCTC

Congruent triangles always have the same shape, but not necessarily the same size.

True or False

If all three sides of one triangle are congruent with all three sides of a second triangle, what are these triangles?

SSS

How are the two triangles congruent

Multiple choice

A SSS

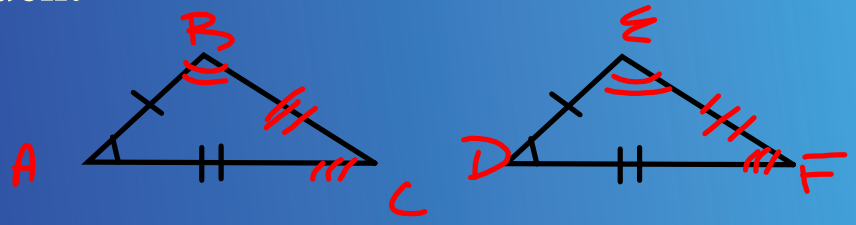
B SAS

C AAS

D ASA

How are the two triangles congruent

Multiple choice



$\triangle ABC \cong \triangle DEF$

A SSS

B SAS

C AAS

D ASA

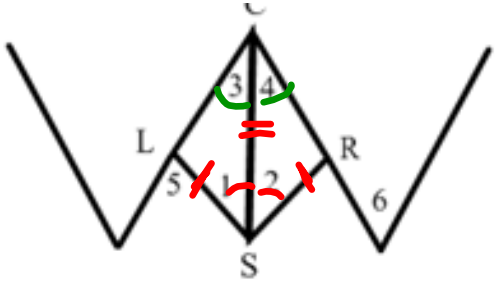
Once you have triangles congruent you can prove parts of the triangle congruent by using CPCTC. Remember that you can only prove triangles congruent by either SSS, SAS, ASA, AAS, or HL .

CPCTC will not prove triangles congruent!!!

↳ comes after proving △'s ≅

1. Given: $\overline{SL} \cong \overline{SR}; \angle 1 \cong \angle 2$

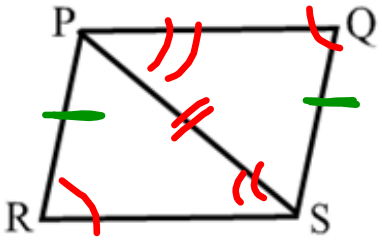
Prove: $\angle 3 \cong \angle 4$



Statements	Reasons
1. $\overline{SL} \cong \overline{SR}; \angle 1 \cong \angle 2$	1. Given
2. $\overline{CS} \cong \overline{CS}$	2. Reflexive prop $\cong$
3. $\triangle CSL \cong \triangle CSR$	3. SAS post
4. $\angle 3 \cong \angle 4$	4. CPCTC

2. Given: $\angle Q \cong \angle R$,
$\angle QPS \cong \angle RSP$

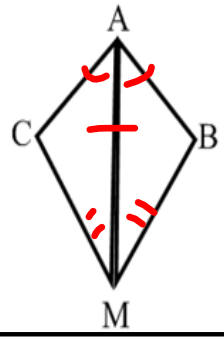
Prove: $\overline{SQ} \cong \overline{PR}$



Statements	Reasons
1. $\angle Q \cong \angle R$, $\angle QPS \cong \angle RSP$	1. Given
2. $\overline{PS} \cong \overline{PS}$	2. Reflexive prop $\cong$
3. $\triangle QPS \cong \triangle RSP$	3. AAS
4. $\overline{SQ} \cong \overline{PR}$	4. CPCTC

3. Given: $\angle CAM \cong \angle BAM$
$\angle BMA \cong \angle CMA$

Prove: $\angle B \cong \angle C$

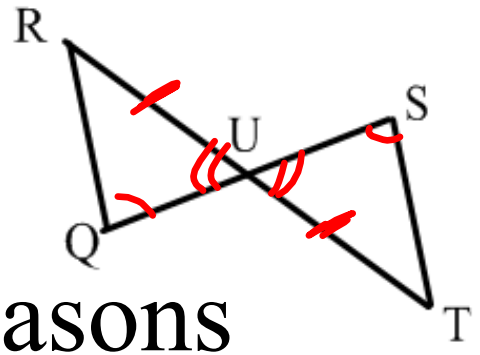


Statements	Reasons
1. $\angle CAM \cong \angle BAM$, $\angle BMA \cong \angle CMA$	1. Given
2. $\overline{AM} \cong \overline{AB}$	2. Reflexive prop $\cong$
3. $\triangle ACM \cong \triangle ABM$	3. ASA post
4. $\angle B \cong \angle C$	4. CPCTC

4. Given: $\angle Q \cong \angle S$;

$\overline{UR} \cong \overline{UT}$

Prove: $\overline{UQ} \cong \overline{US}$



Statements	Reasons
1. $\angle Q \cong \angle S$; $\overline{UR} \cong \overline{UT}$	1. Given
2. $\angle RUQ \cong \angle TUS$	2. Vert. $\angle$s $\cong$
3. $\triangle RUQ \cong \triangle TUS$	3. AAS thm
4. $\overline{UQ} \cong \overline{US}$	4. CPCTC

Assignment:

Pgs 222-224 1-3, 5-11
(8, 9, 10 write a two-column proof)