



4.5 Using CPCTC....

- Students will define CPCTC.
- Students will be able to use CPCTC to complete proofs



Jan 25-11:20 AM

Refresher....

What are congruent triangles?



Jan 25-11:31 AM

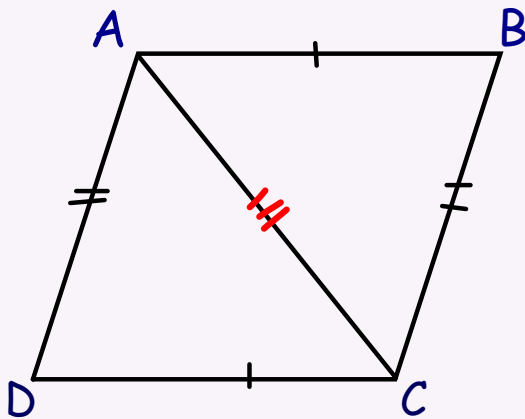
CPCTC:

Corresponding Parts of Congruent Triangles

are Congruent.

If the triangles are congruent, than all corresponding parts are also congruent. You *don't* have to prove all parts are congruent.

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Explain why $\angle B \cong \angle D$.

$\triangle ADC \cong \triangle CBA$ by SSS.

so $\angle B \cong \angle D$ by
CPCTC

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Given: A is the midpoint of MT; A is the midpoint of SR.

Prove: $\angle M \cong \angle T$

first show $\triangle SAM \cong \triangle RAT$

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STATEMENTS	REASONS
1. A is midpt of \overline{MT} & \overline{SR}	1. Given
2. $\overline{AM} = \overline{AT}$ $\overline{SA} = \overline{AR}$	2. def. of midpt.
3. $\angle SAM \cong \angle RAT$	3. Vertical angles.
4. $\triangle SAM \cong \triangle RAT$	4. by S.A.S.
5. $\angle M \cong \angle T$	5. by C.P.C.T.C.

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PROVE: $\overline{KL} \cong \overline{ML}$

① show Δ 's \cong
 ② then use CPCTC

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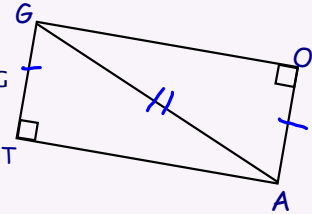
STATEMENTS	REASONS
1. $\overline{MN} \cong \overline{KJ}$	1. given
2. $\overline{NM} \parallel \overline{KJ}$	2. Given
3. $\angle NLM \cong \angle K LJ$	3. vertical angles

4. $\angle K \cong \angle M$ 4. by Alt. int. angles
 5. $\Delta JLK \cong \Delta NLM$ 5. AAS
 6. $\overline{KL} \cong \overline{ML}$ 6. by C.P.C.T.C.

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GIVEN: $\overline{OA} \cong \overline{TG}$

PROVE: $\angle TGA \cong \angle OAG$



① show Δ 's \cong

② use C.P.C.T.C.
to show \angle 's or
segments \cong .

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STATEMENTS	REASONS
1. $\overline{OA} \cong \overline{GT}$	1. given
2. $\overline{GA} \cong \overline{GA}$	2. reflexive prop.
3. $\Delta TAG \cong \Delta OGA$	3. by H-L
4. $\angle TGA \cong \angle OAG$	4. because C.P.C.T.C.

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