

Good Morning!

1. First and Last name

2. "Here"

3. CPCTC Notes

4. DeltaMath help

5. Practice and Unit 1 Test Review





CPCTC Proofs

What does CPCTC stand for?

How is it helpful?

C-orresponding

P-arts of

C-ongruent

T-riangles are

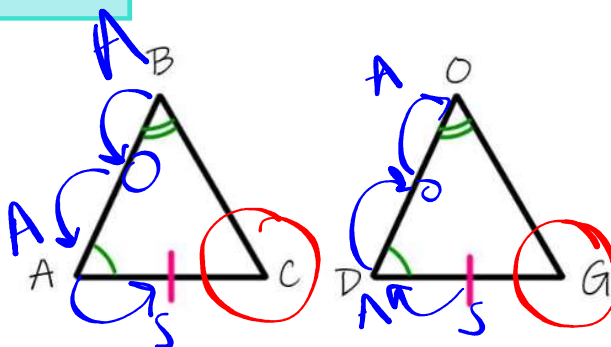
C-ongruent

If we can prove two triangles congruent, we can determine which lengths and angles that were unmarked correspond. We know that the remaining corresponding lengths and angles will be congruent to each other.

Let's take a look:

1. Just looking at the diagram, is $\angle C$ marked to tell us that it is congruent to $\angle G$? **NO**

2. Which postulate or theorem can you use to prove that $\triangle ABC \cong \triangle DOG$? **AAS**



3. Are $\angle C$ and $\angle G$ congruent? Make an argument for why or why not in at least two sentences. **Since we were able to prove $\triangle ABC \cong \triangle DOG$, now we can look at their corresponding parts. In the congruence statement, $\angle C$ corresponds with (matches up with) $\angle G$. That means that $\angle C \cong \angle G$.**

4. Let's write a two column proof to summarize our argument!

GIVEN: $\angle A \cong \angle D$; $\angle B \cong \angle O$; $\overline{AC} \cong \overline{DG}$.

PROVE: $\angle C \cong \angle G$ ** Notice that for CPCTC Proofs, the "Prove" line doesn't list two triangles! **

Statements	Reason/Justification
1. $\angle A \cong \angle D$	Given
2. $\angle B \cong \angle O$	GIVEN
3. $\overline{AC} \cong \overline{DG}$	GIVEN
4. $\triangle ABC \cong \triangle DOG$	AAS
5. $\angle C \cong \angle G$	CPCTC

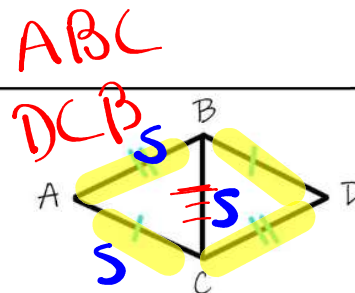
whatever the "Prove" statement is asking you to do should always be your **LAST** step!





2. GIVEN: $\overline{AB} \cong \overline{DC}$; $\overline{AC} \cong \overline{DB}$.

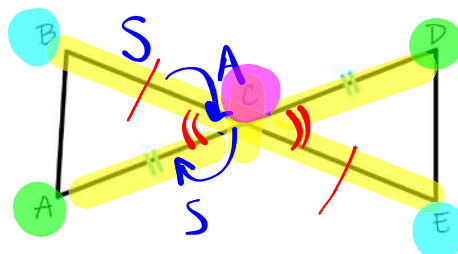
PROVE: $\angle A \cong \angle D$



STATEMENTS	REASONS/JUSTIFICATIONS
1. $\overline{AB} \cong \overline{DC}$	GIVEN
2. $\overline{AC} \cong \overline{DB}$	GIVEN
3. $\overline{BC} \cong \overline{CB}$	Reflexive Property
4. $\triangle ABC \cong \triangle DCB$	SSS
5. $\angle A \cong \angle D$	CPCTC

3. GIVEN: $\overline{AC} \cong \overline{DC}$, C is the midpoint of \overline{BE} .

PROVE: $\overline{AB} \cong \overline{DE}$



STATEMENTS	REASONS/JUSTIFICATIONS
1. $\overline{AC} \cong \overline{DC}$	GIVEN
2. C is the midpoint of \overline{BE}	Given
3. $\overline{BC} \cong \overline{EC}$	Definition of midpoint.
4. $\angle BCA \cong \angle ECD$	Vertical angles are congruent.
5. $\triangle ABC \cong \triangle DEC$	SAS
6. $\overline{AB} \cong \overline{DE}$	CPCTC

