<name>
Class: Honors Geometry
Date: 9/14/06
Topic: Lesson 4-4 (CPCTC)

CPCTC

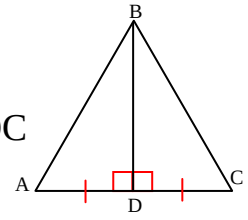
Corresponding Parts of Congruent Triangles are Congruent

If prove 2 Δs are $\cong$ by SSS, SAS, ASA, or AAS then the remaining parts are $\cong$.

Examples

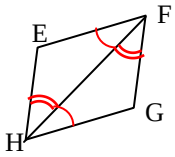
1. Prove $\angle A \cong \angle C$:

$\overline{AD} \cong \overline{DC}$	Given
$\angle ADB \cong \angle CDB$	All rt. $\angle$'s $\cong$
$\overline{BD} \cong \overline{BD}$	Reflexive POC
$\Delta ADB \cong \Delta CDB$	SAS
$\angle A \cong \angle C$	CPCTC



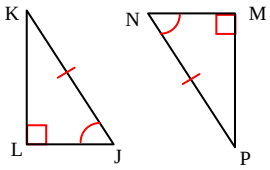
2. Prove $\overline{HE} \cong \overline{FG}$:

$\angle EFH \cong \angle GHF$	Given
$\overline{FH} \cong \overline{HF}$	Reflexive POC
$\angle EHF \cong \angle GFH$	Given
$\Delta EFH \cong \Delta GHF$	ASA
$\overline{HE} \cong \overline{FG}$	CPCTC



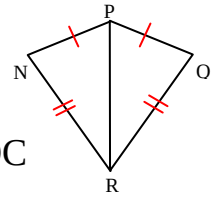
3. Prove $\angle K \cong \angle P$:

$\angle L \cong \angle M$	All rt. $\angle$'s $\cong$
$\angle J \cong \angle N$	Given
$\overline{KJ} \cong \overline{PN}$	Given
$\Delta KLJ \cong \Delta PMN$	AAS
$\angle K \cong \angle P$	CPCTC



4. Prove $\angle N \cong \angle Q$:

$\overline{NP} \cong \overline{QP}$	Given
$\overline{NR} \cong \overline{QR}$	Given
$\overline{RP} \cong \overline{RP}$	Reflexive POC
$\Delta RNP \cong \Delta RQP$	SSS
$\angle N \cong \angle Q$	CPCTC



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Solving sys. of linear equations

1. pick 1 and solve for *y*
2. subst. back into the other
3. solve for *x*
4. dbl-check answer by subst. *x* & *y* into other equation

If answer is:

1. A true non-zero answer (i.e. 3 = 3)
   - 1 solution
   - Lines' intersection point.
2. A true zero answer (i.e. 0 = 0)
   - Infinite # solutions
   - Equations represent same line
3. A false answer (i.e. 3 = 7)
   - No solutions
   - The lines don't intersect