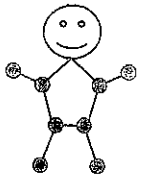
Geometry Honors
CPCTC WORKSHEET



Name Key
Date _____ Hour _____

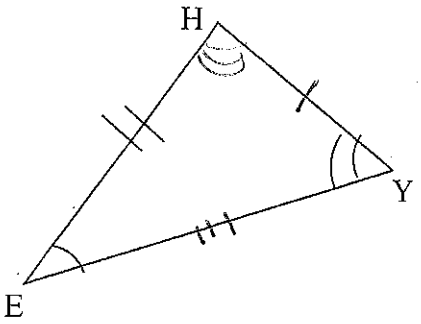
#1: ΔHEY is congruent to ΔMAN by AAS.

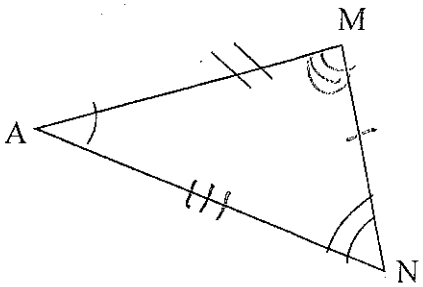
What other parts of the triangles are congruent by CPCTC?

$\angle H \cong \angle M$

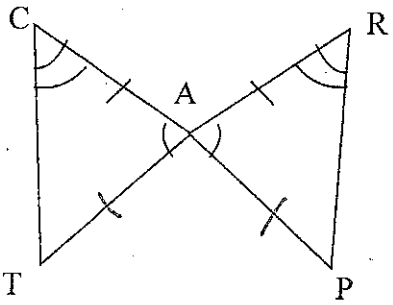
$\overline{HY} \cong \overline{MN}$

$\overline{EY} \cong \overline{AN}$





#2:



ΔCAT ≅ ΔRAP, by ASA

THEREFORE:

$\angle T \cong \angle P$, by CPCTC

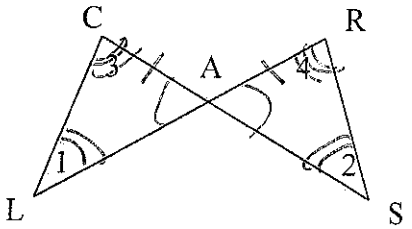
$\overline{AP} \cong \overline{AT}$, by CPCTC

$\overline{CT} \cong \overline{RP}$, by CPCTC

#3:

Given: $\overline{AC} \cong \overline{AR}$ and $\angle 1 \cong \angle 2$

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



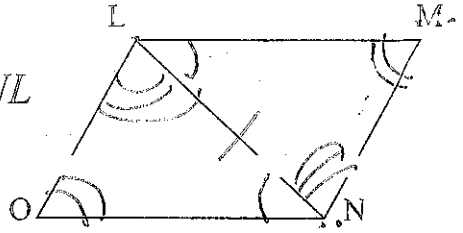
Proof:

1. $\overline{AC} \cong \overline{AR}$	1. Given
2. $\angle 1 \cong \angle 2$	2. Given
3. $\angle CAL \cong \angle RAS$	3. Vertical Angles
4. ΔLCA ≅ ΔSRA	4. AAS
5. $\angle 3 \cong \angle 4$	5. CPCTC

#4:

Given: $\angle NLM \cong \angle LNO$ and $\angle OLN \cong \angle MNL$

Prove: $\angle M \cong \angle O$



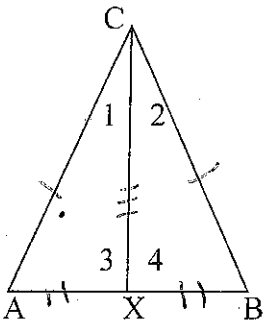
Proof:

1. $\angle NLM \cong \angle LNO$	1. Given
2. $\angle OLN \cong \angle MNL$	2. Given
3. $\overline{LN} \cong \overline{LN}$	3. Reflexive Property of $\cong$
4. $\Delta LMN \cong \Delta NOL$	4. ASA
5. $\angle M \cong \angle O$	5. CPCTC

#5

Given: $\overline{AC} \cong \overline{BC}$ and $\overline{AX} \cong \overline{BX}$

Prove: $\angle 1 \cong \angle 2$



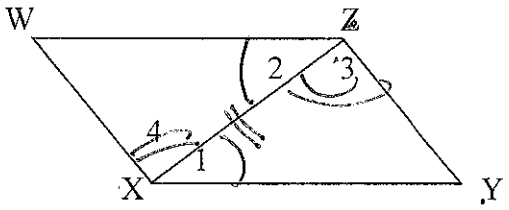
Proof:

1. $\overline{AC} \cong \overline{BC}$ & $\overline{AX} \cong \overline{BX}$	1. Given
2. $\overline{CX} \cong \overline{CX}$	2. Reflexive Prop. of Congruence
3. $\Delta AXC \cong \Delta BXC$	3. SSS
4. $\angle 1 \cong \angle 2$	4. CPCTC

#6

Given: $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$

Prove: $\overline{XY} \cong \overline{ZW}$

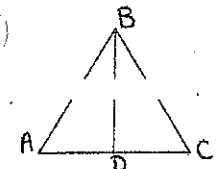


Proof:

1. $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$	1. Given
2. $\overline{XZ} \cong \overline{XZ}$	2. Reflexive
3. $\Delta XWZ \cong \Delta ZYX$	3. ASA
4. $\overline{XY} \cong \overline{ZW}$	4. CPCTC.

Chapter 6 Proof Practice #3 (CPCTC)

Name Key

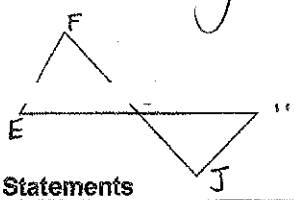


Given: $\angle BDA$ & $\angle BDC$ are right $\angle$'s

Prove: $\angle ABD \cong \angle CBD$

Statements	Reasons

SKIP



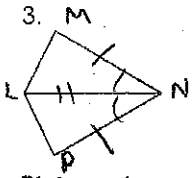
Given: G is the midpoint of $\overline{EH}$

Prove: $\overline{FG} \cong \overline{JG}$

Statements	Reasons

SKIP

3.



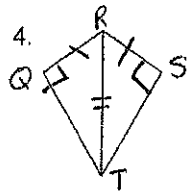
Given: $\overline{MN} \cong \overline{PN}$

$\overline{LN}$ bisects $\angle MNP$

Prove: $\angle MLN \cong \angle PLN$

Statements	Reasons
$\overline{MN} \cong \overline{PN}$	Given
$\overline{LN}$ bisect $\angle MNP$	Given
$\overline{LN} \cong \overline{LN}$	Reflexive
$\triangle LMN \cong \triangle LPN$	SAS
$\angle MLN \cong \angle PLN$	CPCTC

4.



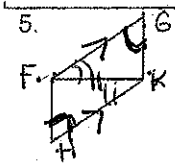
Given: $\angle Q$ & $\angle S$ are right $\angle$'s

$\overline{QR} \cong \overline{SR}$

Prove: $\angle QRT \cong \angle SRT$

Statements	Reasons
$\angle Q$ & $\angle S$ are Rt $\angle$'s	Given
$\overline{QR} \cong \overline{SR}$	Given
$\overline{RT} \cong \overline{RT}$	Reflexive
$\triangle TQR \cong \triangle TSR$	HL
$\angle QRT \cong \angle SRT$	CPCTC

5.



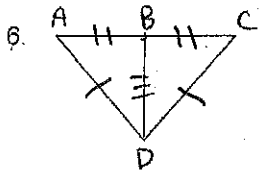
Given: $\overline{FG} \parallel \overline{HK}$,

$\angle G \cong \angle H$

Prove: $\overline{FH} \cong \overline{KG}$

Statements	Reasons
$\overline{FG} \parallel \overline{HK}$	Given
$\angle G \cong \angle H$	Given
$\angle GFK \cong \angle HKF$	Alt. Int. Angles
$\overline{FK} \cong \overline{FK}$	Reflexive
$\triangle HKF \cong \triangle GFK$	AAS
$\overline{FH} \cong \overline{KG}$	CPCTC

6.



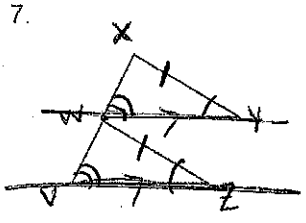
Given: $\overline{AD} \cong \overline{CD}$

$\overline{BD}$ bisects $\overline{AC}$

Prove: $\angle ADB \cong \angle CDB$

Statements	Reasons
$\overline{AD} \cong \overline{CD}$	Given
$\overline{BD}$ bisects $\overline{AC}$	Given
$\overline{BD} \cong \overline{BD}$	Reflexive
$\overline{AB} \cong \overline{CB}$	def. of bisect
$\triangle ABD \cong \triangle CBD$	SSS
$\angle ADB \cong \angle CDB$	CPCTC

7.



Given: $\overline{WY} \parallel \overline{VZ}$

$\angle Y \cong \angle Z$

$\overline{XY} \cong \overline{WZ}$

Prove: $\overline{VW} \cong \overline{XW}$

Statements	Reasons
$\overline{WY} \parallel \overline{VZ}$	given
$\angle Y \cong \angle Z$	given
$\overline{WZ} \cong \overline{XY}$	given
$\angle XWY \cong \angle WVZ$	corresponding
$\triangle ZVW \cong \triangle YWX$	AAS
$\overline{VW} \cong \overline{XW}$	CPCTC