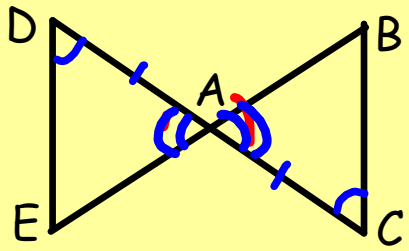
11/4/19 - Warm Up Problem

Given: $\angle EDA \cong \angle BCA$

$\overline{DA} \cong \overline{AC}$

Prove: $\Delta DAE \cong \Delta CAB$

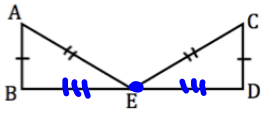


Statements	Justifications
1. $\angle EDA \cong \angle BCA$	Given
2. $\overline{DA} \cong \overline{AC}$	Given
3. $\angle DAE = \angle BAC$	Vert. $\angle$s
4. $\Delta DAE \cong \Delta CAB$	ASA

Complete each proof.

20. Given: $\overline{AE} \cong \overline{CE}$, $\overline{AB} \cong \overline{CD}$, E is the midpoint of $\overline{BD}$

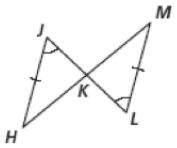
Prove: $\Delta EAB \cong \Delta ECD$



Statements	Justifications
1.	GIVEN
2.	
3.	
4. $\overline{BE} \cong \overline{ED}$	Def. of Midpoint
5. $\Delta EAB \cong \Delta ECD$	SSS

21. Given: $\overline{JH} \cong \overline{ML}$ and $\angle HJK \cong \angle MLK$

Prove: $\Delta HJK \cong \Delta MLK$



Statements	Justifications
1.	
2.	
3.	
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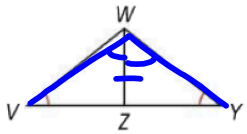
22. Given: $\angle V \cong \angle Y$ and $\overrightarrow{WZ}$ bisects $\angle VWY$

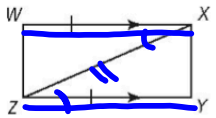
Prove: $\Delta VWZ \cong \Delta YWZ$



Statements	Justifications
1.	GIVEN
2.	
3. $\angle VWZ \cong \angle YWZ$	Def. of Bisect
4. $\overline{WZ} \cong \overline{WZ}$	Reflexive Prop.
5. $\Delta VWZ \cong \Delta YWZ$	AAS

23. Given: $\overline{WX} \parallel \overline{YZ}, \overline{WX} \cong \overline{YZ}$

Prove: $\Delta WXZ \cong \Delta YZX$

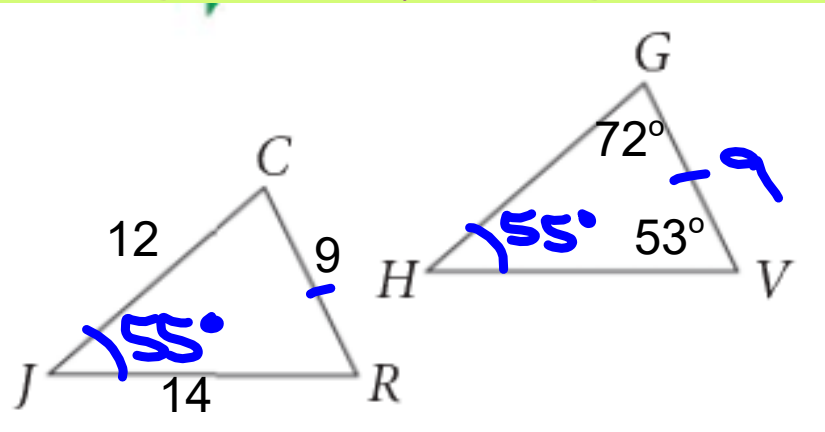


Statements	Justifications
1.	GIVEN
2.	
3. $\angle WXZ \cong \angle XZY$	Alt. Int. Thm.
4. $\overline{XZ} \cong \overline{XZ}$	Reflexive Prop.
5. $\Delta WXZ \cong \Delta YZX$	SAS

Section 4.4 - Using Corresponding Parts

Goal: Prove that sides and angles of triangles are congruent

Using Corresponding Parts



If $\Delta JCR \cong \Delta HGV$, then...

Angle J = 55°

GV = 9

You are able to transfer measures from one triangle to the other because of this fact:

CPCTC

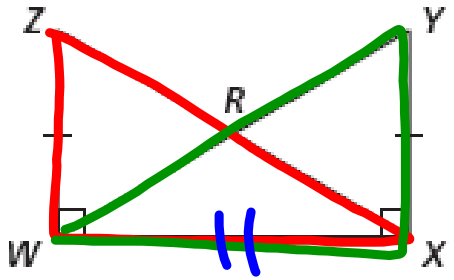
Corresponding Parts of Congruent Triangles are Congruent

Using CPCTC

- You must prove that the triangles are congruent first, then use CPCTC to prove 2 corresponding parts are congruent.

Given: $\overline{ZW} \cong \overline{YX}$ and $\angle ZWX \cong \angle YXW$

Prove: $\angle Z \cong \angle Y$



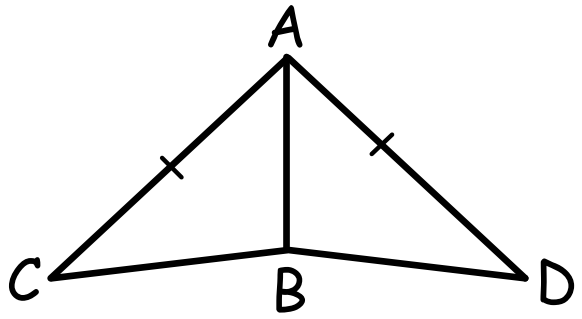
Statements	Justifications
1. $\overline{ZW} \cong \overline{YX}$	Given
2. $\angle ZWX \cong \angle YXW$	Given
3. $\overline{WX} \cong \overline{WX}$	Reflexive Prop.
4. $\Delta ZWX \cong \Delta YXW$	SAS
5. $\angle Z \cong \angle Y$	CPCTC

Using CPCTC

Given: AB bisects ∠CAD

$AC \cong DA$

Prove: $\angle C \cong \angle D$

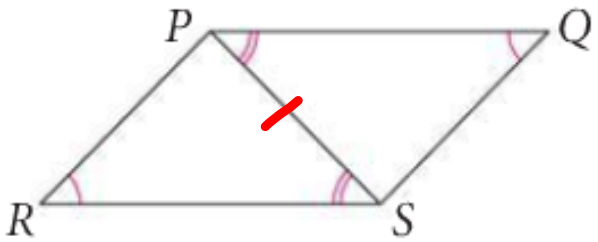


Statements	Justifications
1. AB bisects ∠CAD	Given
2. $AC \cong DA$	Given
3. $\angle CAB \cong \angle DAB$	Def. of Bisect
4. $AB \cong AB$	Reflexive Property
5. $\Delta CAB \cong \Delta DAB$	SAS
6. $\angle C \cong \angle D$	CPCTC

Try writing this proof in your notes.

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

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



Statements	Justifications
1. $\angle Q \cong \angle R$	GIVEN
2. $\angle QPS \cong \angle RSP$	
3. $\overline{PS} \cong \overline{PS}$	Reflexive Prop.
4. $\triangle PRS \cong \triangle SQP$	AAS
5. $\overline{SQ} \cong \overline{PR}$	CPCTC

Assignment:

Finish Concept 10 Worksheet

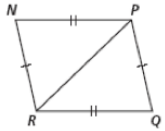
- due Thursday 11/7

PROOFS USING CPCTC

Complete each proof.

24. Given: $\overline{NP} \cong \overline{RQ}$ and $\overline{NR} \cong \overline{PQ}$

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



Statements	Justifications
1.	
2.	
3.	
4.	
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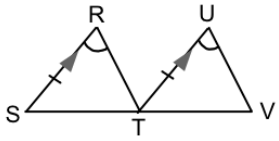
25. Given: $\overline{RS} \| \overline{TU}$, $\overline{RS} \cong \overline{TU}$, $\angle SRT \cong \angle TUV$

Prove: $\angle STR \cong \angle TVU$



Statements	Justifications
1.	
2.	
3.	
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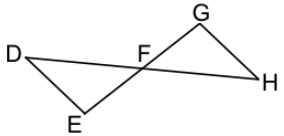
6.	

26. Given: F is the midpoint of $\overline{DH}$
F is the midpoint of $\overline{EG}$

Prove: $\angle DEF \cong \angle HGF$



Statements	Justifications
1.	
2.	
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6.	
7.	