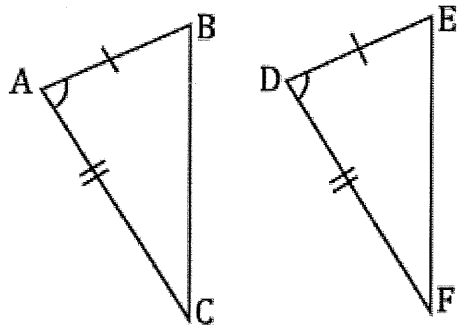
More Proofs Involving Congruent Triangles and Congruent Parts September 23 2014 (Tuesday)

In geometry, "Corresponding parts of congruent triangles are congruent" (**CPCTC**) is the abbreviation of a theorem regarding congruent triangles. **CPCTC** states that if two or more triangles are proven congruent by any method, then all of their corresponding angles and sides are congruent as well.

Ex. 1.

Given: $\overline{AB} \cong \overline{DE}$, $\angle A \cong \angle D$, and $\overline{AC} \cong \overline{DF}$

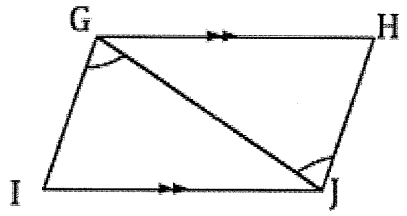


Prove: $\angle C \cong \angle F$

Statement	Reason
1)	
2)	
3)	
4)	
5)	

Ex. 2.

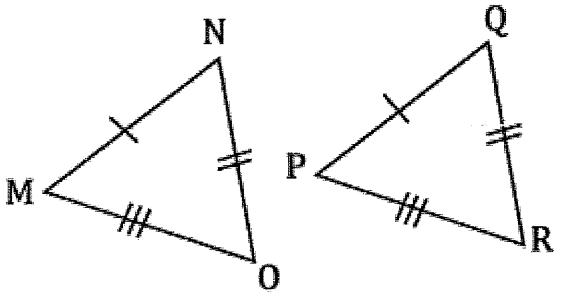
Given: $\overline{GH} \parallel \overline{IJ}$, $\angle IGJ \cong \angle HJG$



Prove: $\overline{IG} \cong \overline{HJ}$

Statement	Reason
1)	
2)	
3)	
4)	
5)	
6)	

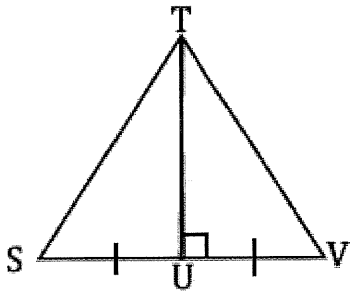
1. Given: $\overline{MN} \cong \overline{PQ}$, $\overline{NO} \cong \overline{QR}$, and $\overline{OM} \cong \overline{RP}$



Prove: $\angle M \cong \angle P$

Statement	Reason
1)	
2)	
3)	
4)	
5)	

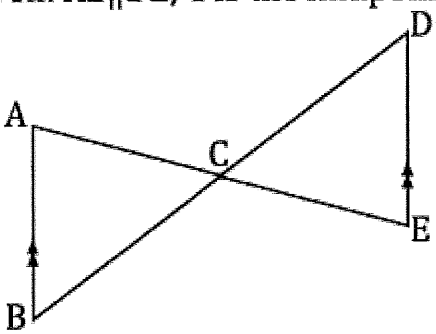
2. Given: $\overline{SU} \cong \overline{UV}$



Prove: $\overline{ST} \cong \overline{VT}$

Statement	Reason
1)	
2)	
3)	
4)	

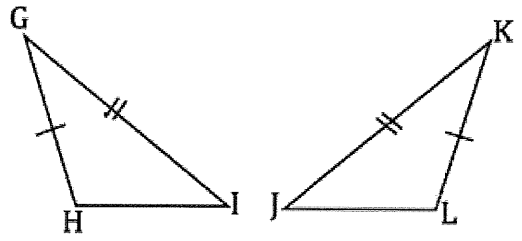
3. Given: $\overline{AB} \parallel \overline{DE}$, C is the midpoint of $\overline{AE}$



Prove: $\overline{BC} \cong \overline{DC}$

Statement	Reason
1)	
2)	
3)	
4)	
5)	
6)	
7)	

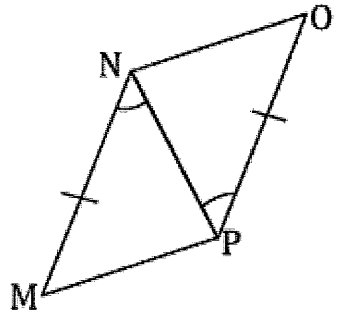
4. Given: $\overline{GH} \cong \overline{KL}$, $\angle G \cong \angle K$, and $\overline{GI} \cong \overline{KJ}$



Prove: $\overline{HI} \cong \overline{LJ}$

Statement	Reason
1)	
2)	
3)	
4)	
5)	

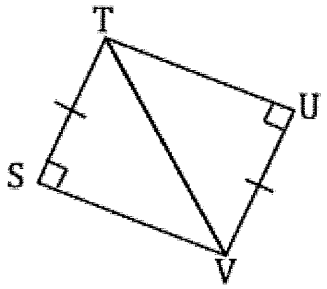
5. Given: $\angle MNP \cong \angle OPN$, and $\overline{MN} \cong \overline{OP}$



Prove: $\overline{MP} \cong \overline{NO}$

Statement	Reason
1)	
2)	
3)	
4)	
5)	

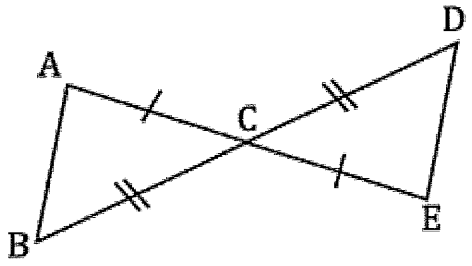
6. Given: $\overline{ST} \cong \overline{VU}$



Prove: $\angle SVT \cong \angle UTV$

Statement	Reason
1)	
2)	
3)	
4)	

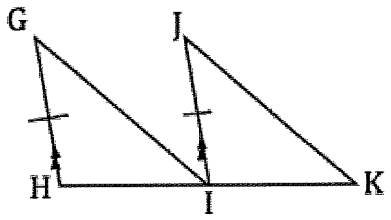
7. Given: $\overline{AC} \cong \overline{CE}$, $\overline{DC} \cong \overline{BC}$



Prove: $\angle B \cong \angle D$

Statement	Reason
1)	
2)	
3)	
4)	
5)	

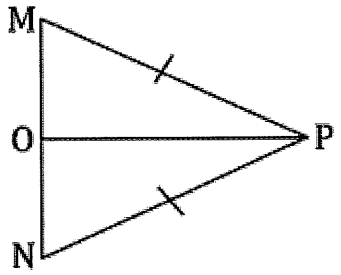
8. Given: $\overline{GH} \parallel \overline{JI}$, I is the midpoint of HK and $\overline{GH} \cong \overline{JI}$



Prove: $\angle G \cong \angle J$

Statement	Reason
1)	
2)	
3)	
4)	
5)	
6)	
7)	

9. Given: $\overline{MP} \cong \overline{NP}$, $\overline{MN} \perp \overline{OP}$



Prove: $\overline{MO} \cong \overline{ON}$

Statement	Reason
1)	
2)	
3)	
4)	
5)	