

# STUDY GUIDE

Geometry

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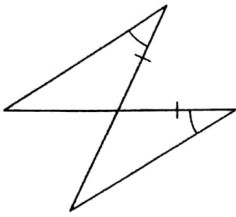
Name \_\_\_\_\_ ID: 1

## Triangle Congruence

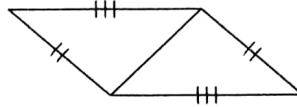
Date \_\_\_\_\_ Period \_\_\_\_\_

State if the two triangles are congruent. If they are, state how you know.

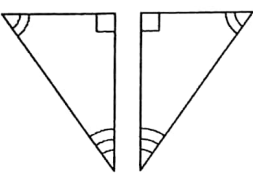
1)



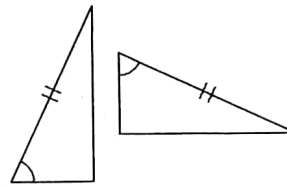
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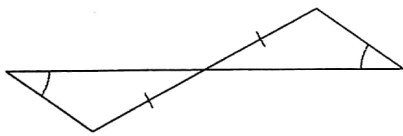
3)



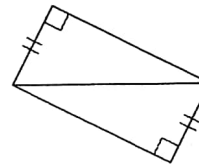
4)



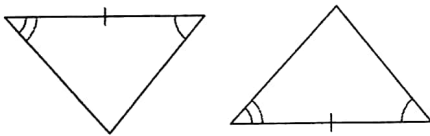
5)



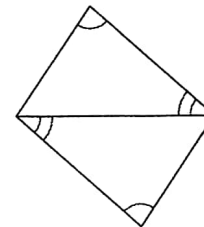
6)



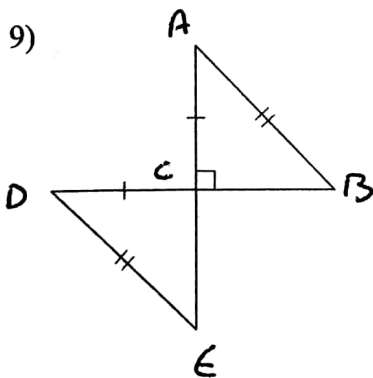
7)



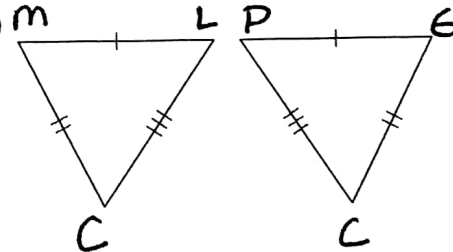
8)



9)



10)



Write the congruence  
Statement \_\_\_\_\_

Write the congruence  
Statement \_\_\_\_\_

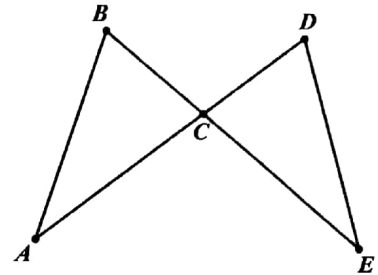
**Geometry, Unit 5 – Congruent Triangles Proof Activity – Part I**

Name \_\_\_\_\_

For each problem, do the following:

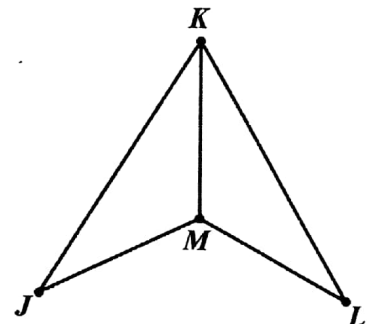
- Show the given information in the diagram (using tick marks to show congruent sides and arcs to show congruent angles)
- Show any other congruent parts you notice (from vertical angles, sides shared in common, or alternate interior angles with parallel lines)
- Give the postulate or theorem that proves the triangles congruent (SSS, SAS, ASA, AAS, HL)
- Finally, fill in the blanks to complete the proof.

1. Given:  $\overline{BC} \cong \overline{DC}$ ;  $\overline{AC} \cong \overline{EC}$   
 Prove:  $\triangle BCA \cong \triangle DCE$



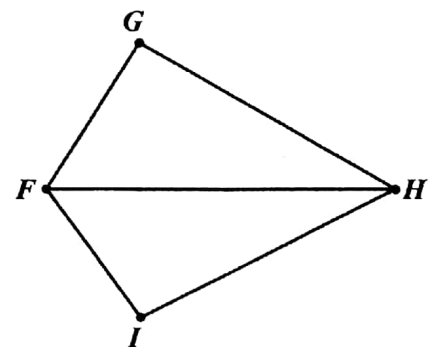
Statements	Reasons
1.	1. Given
2.	2. Vertical $\angle$ s Theorem
3. $\triangle BCA \cong \triangle DCE$	3.

2. Given:  $\overline{JK} \cong \overline{LK}$ ;  $\overline{JM} \cong \overline{LM}$   
 Prove:  $\triangle KJM \cong \triangle KLM$



Statements	Reasons
1.	1.
2.	2. Reflexive Prop.
3.	3.

3. Given:  $\angle G \cong \angle I$ ;  $\overline{FH}$  bisects  $\angle GFI$   
 Prove:  $\triangle GFH \cong \triangle IFH$



Statements	Reasons
1. $\angle G \cong \angle I$ ; $\overline{FH}$ bisects $\angle GFI$	1.
2. $\angle GFH \cong \angle IFH$	2. Def. of _____
3.	3. Reflexive Prop.
4.	4.