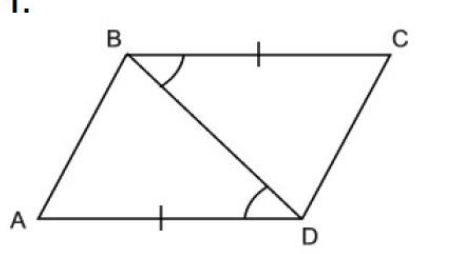
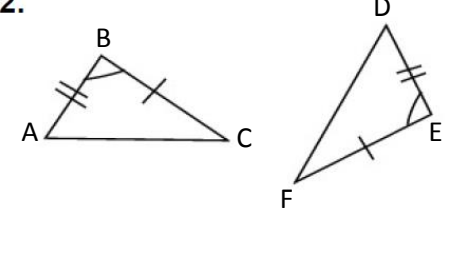
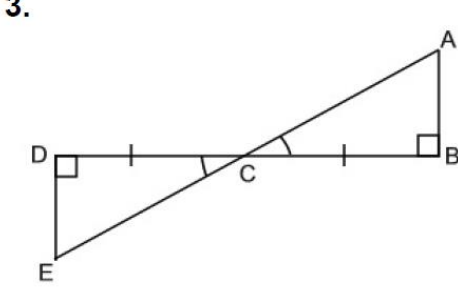
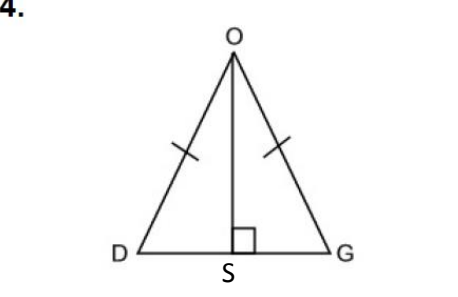
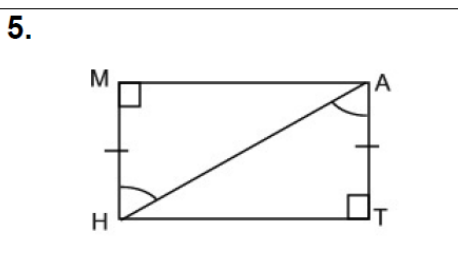
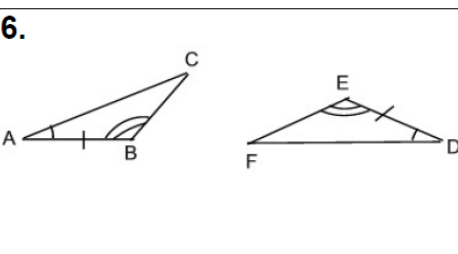
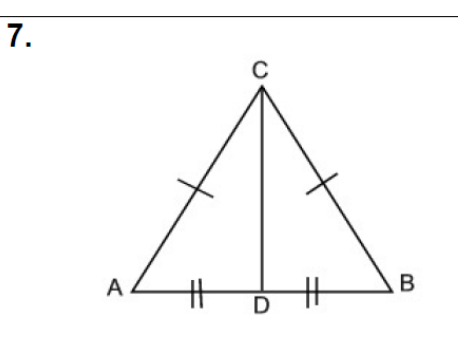
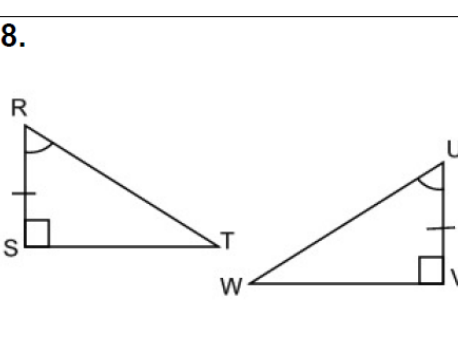


Name: _____ Date: _____ Section: _____

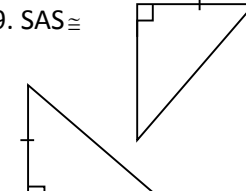
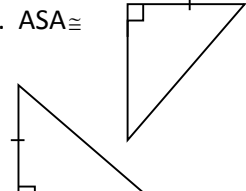
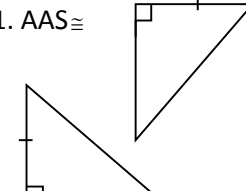
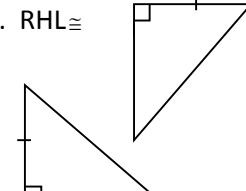
Geometry: Unit 4 Day 7R; 4-10L Notes and Homework: Mixed Proof Practice

Questions 1-8: For each set of triangles, name the criteria that can be used to prove two congruent triangles and then state the triangle congruency.

<p>1.</p> 	<p>2.</p> 	<p>1. $\triangle ABD \cong \triangle$ _____ by _____</p> <p>2. $\triangle ABC \cong \triangle$ _____ by _____</p>
<p>3.</p> 	<p>4.</p> 	<p>3. $\triangle DEC \cong \triangle$ _____ by _____</p> <p>4. $\triangle DOS \cong \triangle$ _____ by _____, _____ NOTE:</p>
<p>5.</p> 	<p>6.</p> 	<p>5. $\triangle MHA \cong \triangle$ _____ by _____, _____, _____</p> <p>6. $\triangle ABC \cong \triangle$ _____ by _____</p>
<p>7.</p> 	<p>8.</p> 	<p>7. $\triangle CAD \cong \triangle$ _____ by _____, _____</p> <p>8. $\triangle RST \cong \triangle$ _____ by _____</p>

All Rights Reserved © MathBits.com

For questions 9-12, given the two triangles with the congruent parts as marked, mark the corresponding parts needed in order to prove the triangles congruent by the designated criteria:

<p>9. SAS \cong</p> 	<p>10. ASA \cong</p> 	<p>11. AAS \cong</p> 	<p>12. RHL \cong</p> 
----------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

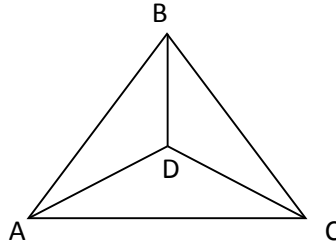
PROBLEM SET 4-7R / 4-10L

Determine the congruency criteria that applies to prove the following sets of triangles are congruent based on the given information and the drawing.

1. Given: \overline{BD} bisects $\angle ABC$; $\overline{AB} \cong \overline{CB}$

Prove: $\triangle ABD \cong \triangle CBD$

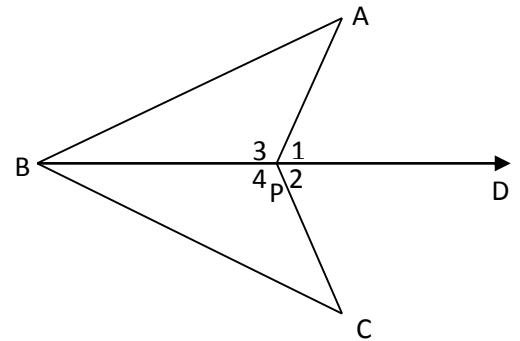
Criteria: _____



2. Given: $\angle 1 \cong \angle 2$, \overline{BD} bisects $\angle ABC$

Prove: $\triangle BAP \cong \triangle BCP$

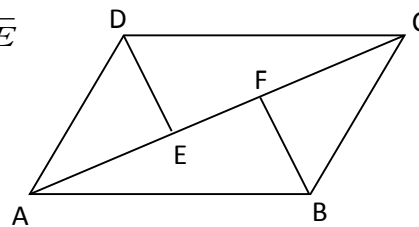
Criteria: _____



3. Given: $\overline{AD} \parallel \overline{CB}$, $\angle ADE \cong \angle CBF$, $\overline{AF} \cong \overline{CE}$

Prove: $\triangle ADE \cong \triangle CBF$

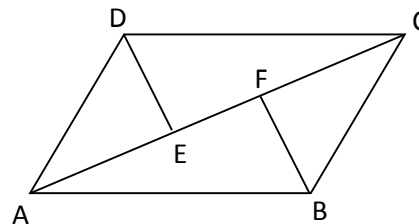
Criteria: _____



4. Given: $\overline{AD} \cong \overline{CB}$, $\angle AED \cong \angle CFB$ are right angles, $\overline{AE} \cong \overline{CF}$

Prove: $\triangle ADE \cong \triangle CBF$

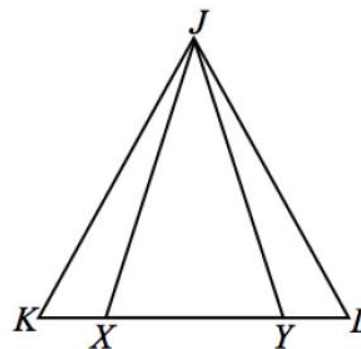
Criteria: _____



5. Given: $\overline{JK} \cong \overline{JL}$; $\overline{JX} \cong \overline{JY}$

Prove: $\triangle JKX \cong \triangle JLY$

Criteria: _____

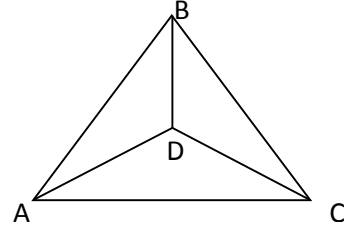


Determine the information needed in order to satisfy the specified congruency criteria:

6. Given: $\angle DAB \cong \angle DCB$ and $\overline{AB} \cong \overline{CB}$

Prove: $\triangle ABD \cong \triangle CBD$ by $SAS \cong SAS$

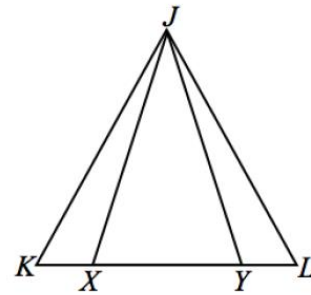
Information needed: _____



7. Given: $\overline{JK} \cong \overline{JL}$

Prove: $\triangle JKX \cong \triangle JLY$ by $ASA \cong ASA$

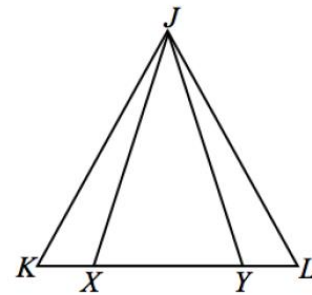
Information needed: _____



8. Given: $\angle JXY \cong \angle JYX$

Prove: $\triangle JKY \cong \triangle JLY$ by $SAS \cong SAS$

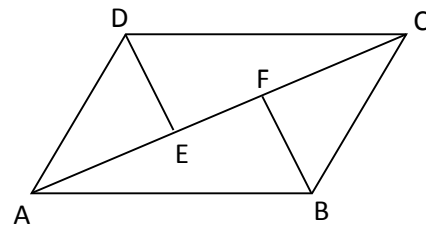
Information needed: _____



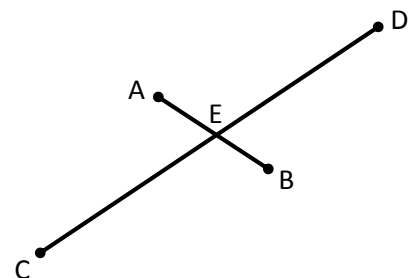
9. Given: $\overline{DE} \perp \overline{AC}, \overline{BF} \perp \overline{AC}, \overline{DE} \cong \overline{BF}$

Prove: $\triangle DEC \cong \triangle BFA$ by $RHL \cong RHL$

Information needed: _____



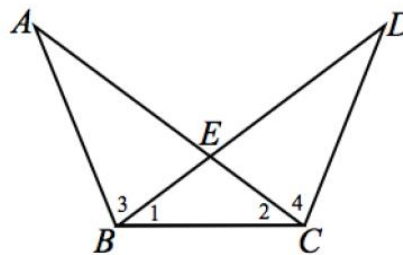
10. Given the two line segments \overline{AB} and \overline{CD} which bisect each other at point E, explain why $AC=BD$.



Do the following proofs using your choice of format:

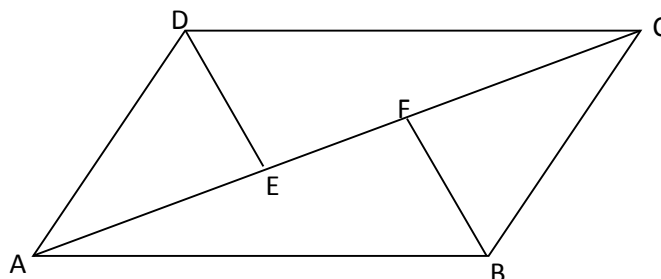
11. Given: $\angle 3 \cong \angle 4$; $\angle 1 \cong \angle 2$

Prove: $\triangle AEB \cong \triangle DEC$



12. Given: $\overline{AD} \parallel \overline{CB}$, $\overline{AD} \cong \overline{CB}$
 $\overline{AF} \cong \overline{CE}$

Prove: $\triangle AED \cong \triangle CFB$



Extra Credit Challenge

Do on separate paper

Given: $\overline{AB} \perp \overline{BC}$, $\overline{BC} \perp \overline{DC}$.
 \overline{DB} bisects $\angle ABC$, \overline{AC} bisects $\angle DCB$.
 $EB = EC$.

Prove: $\triangle BEA \cong \triangle CED$

