Name_____Date_____

Geometry

Day 40: Review

In 9–14, pairs of line segments marked with the same number of strokes are congruent. Pairs of angles marked with the same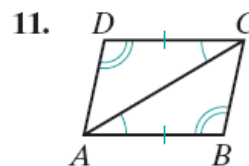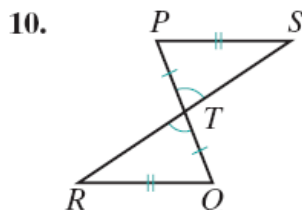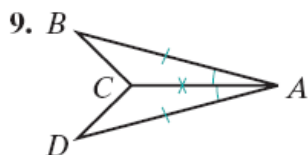 number of arcs are congruent. A line segment or an angle marked with "×" is congruent to itself by the reflexive property of congruence.

   In each case, is the given information sufficient to prove congruent triangles? If so, write the abbreviation for the postulate that proves the triangles congruent.

9.

10.

11.

12.
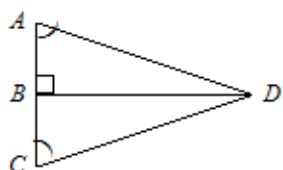
13.

14.
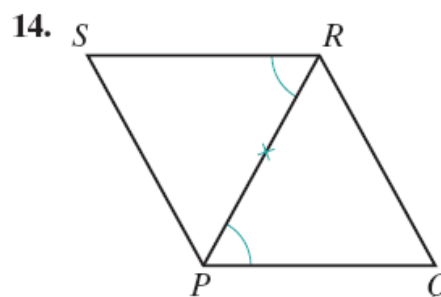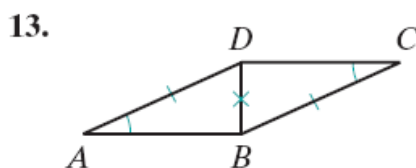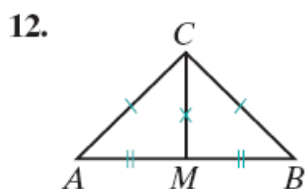
1. What other information do you need in order to prove the triangles congruent using the SAS Congruence Postulate?
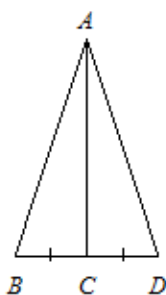
    a. $\angle BAC \cong \angle DAC$

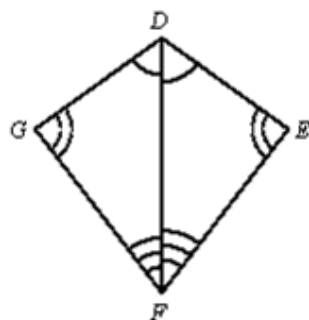   b. $\overline{AC} \perp \overline{BD}$

    c. $\angle CBA \cong \angle CDA$

    d. $\overline{AC} \cong \overline{BD}$

2. Name the theorem or postulate that lets you immediately conclude $\triangle ABD \cong \triangle CBD$.
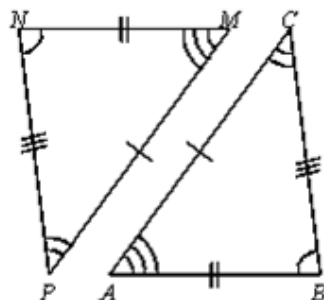
    a. AAS   b. SAS   c. ASA   d. none of these

3. From the information in the diagram, can you prove $\triangle FDG \cong \triangle FDE$? Explain.

D

G   E

+

a. yes, by ASA   c. yes, by SAS
b. yes, by AAA   d. no
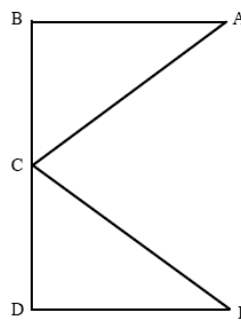
F

4. $\angle ABC \cong$ ___?___

a. $\angle PMN$ b. $\angle NPM$ c. $\angle NMP$ d. $\angle MNP$
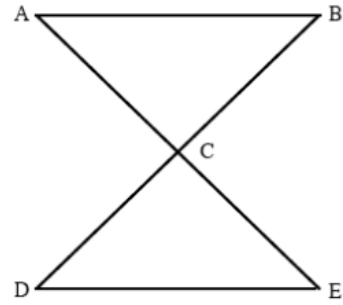
1. Given: $\angle BCA \cong \angle DCE$
              $\angle B$ and $\angle D$ are right angles
              $\overline{BC} \cong \overline{CD}$

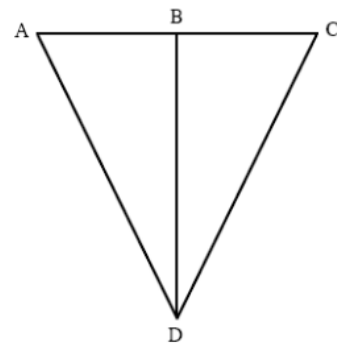   Prove: $\overline{BA} \cong \overline{DE}$

2. Given: $\overline{AC} \cong \overline{EC}$

C is the midpoint of $\overline{BD}$
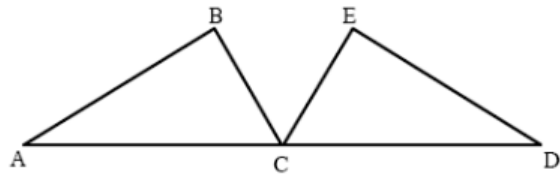
Prove: $\overline{AB} \cong \overline{ED}$

3. Given: $\overline{AC} \perp \overline{BD}$

$\overline{AD} \cong \overline{CD}$
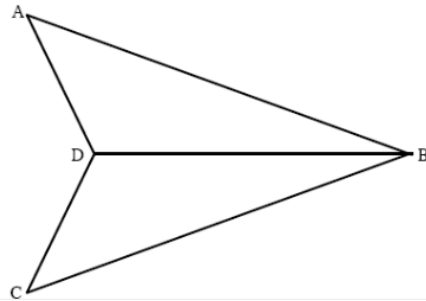
Prove: $\overline{AB} \cong \overline{BC}$

4. Given: $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EC}$,
C is the midpoint of $\overline{AD}$

Prove: $\angle A \cong \angle D$

5. Given: $\overline{DB}$ bisects $\angle ABC$
$\overline{AB} \cong \overline{CB}$

Prove: $\angle A \cong \angle C$

6. Given: C is the midpoint of $\overline{AE}$
   $\angle B$ and $\angle D$ are right angles
   $\angle A \cong \angle E$

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