Name _____ Date _____ Pd _____

Triangle Congruence Test Review

1. In your own words, explain the Triangle Sum Theorem. Then, prove the Triangle Sum Theorem.

2. In your own words, explain the Triangle Inequality Theorem.

3. Given a scalene triangle, what is the relationship between the interior angles and the lengths of the sides of the triangle?

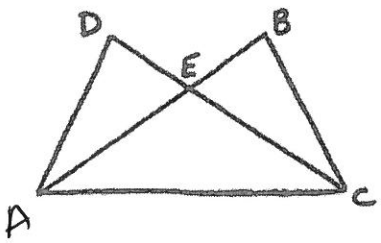
4. Name the triangle congruence postulates/theorem (shortcuts) we use to prove triangles are congruent.

   *What is the only situation where we can use SSA postulate? What do we call this postulate?

5. Prove the following:

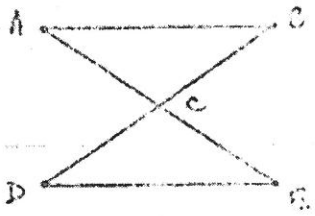
Given: $\angle BAC \cong \angle DCA$
$\angle D \cong \angle B$

Prove: $\triangle ADE \cong \triangle CBE$



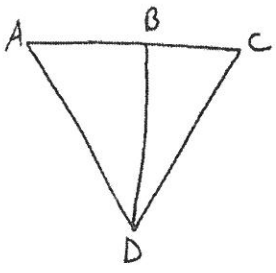
Given: $\overline{AB} \parallel \overline{DE}$
C is midpt to $\overline{DB}$

Prove: $\triangle ABC \cong \triangle EDC$



) Given: $\overline{BD}$ bisects $\angle ADC$
$\overline{BD} \perp \overline{AC}$

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



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2. Given:

$\overline{AC} \perp \overline{CB}$

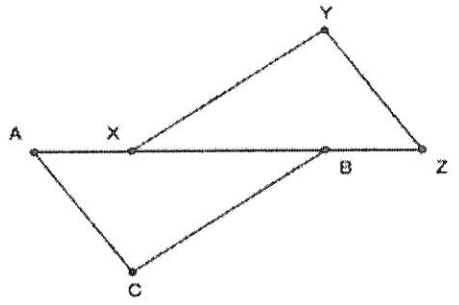
$\overline{XY} \perp \overline{YZ}$

$\overline{AC} \cong \overline{YZ}$

$\overline{AX} \cong \overline{BZ}$

Prove:

$\overline{CB} \cong \overline{XY}$



4. Given:

$\overline{GF} \perp \overline{AE}$ $\overline{EG} \cong \overline{DG}$

$\overline{GC} \perp \overline{BD}$

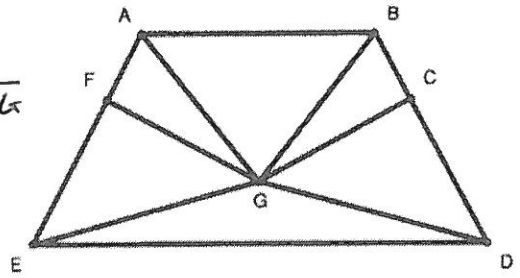
$\angle GAB \cong \angle GBA$ $\overline{AG} \cong \overline{BG}$

$\angle GED \cong \angle GDE$

$\overline{EF} \cong \overline{DC}$

Prove:

$\Delta AFG \cong \Delta BCG$



Given:

$\overline{BD} \cong \overline{DF}$

$\overline{CD} \cong \overline{DE}$

Prove:

~~$\overline{BC} \cong \overline{EF}$~~ $\overline{BE} \cong \overline{FC}$