Cholkar MCHS MATH II ___/___/___ Name_____

Lesson 3 Congruent Triangles Notes

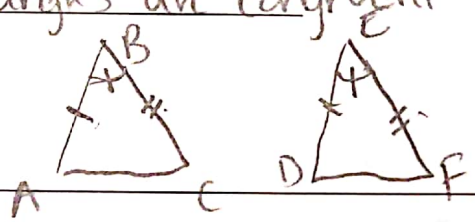
ANGLE-SIDE-ANGLE (ASA) CONGRUENCE POSTULATE: If two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then the triangles are congruent.

Diagram:

$\angle B \cong \angle E$
$\overline{BC} \cong \overline{EF}$
$\angle C \cong \angle F$

SIDE-ANGLE-SIDE (SAS) CONGRUENCE POSTULATE: If two sides and the included angle of one triangle are congruent to two sides and the congruent angle of another triangle, then the triangles are congruent

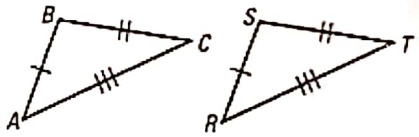
Diagram:



$\overline{AB} \cong \overline{DE}$
$\angle B \cong \angle E$
$\overline{BC} \cong \overline{EF}$

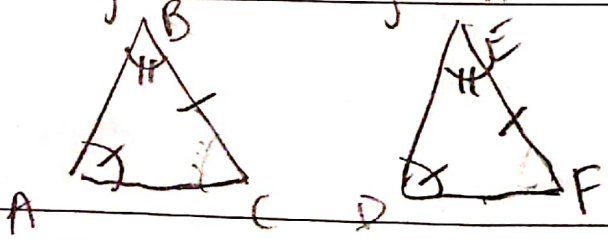
SIDE-SIDE-SIDE (SSS) CONGRUENCE POSTULATE: If three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent

Diagram:



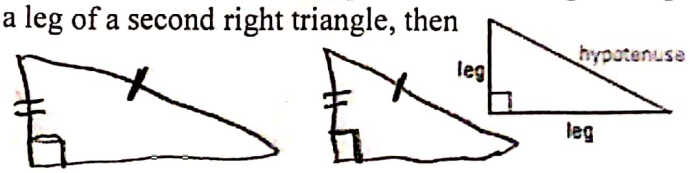
ANGLE-ANGLE-SIDE (AAS) CONGRUENCE POSTULATE: If two angles and a non-included side of one triangle are congruent to the corresponding angles and side of another triangle, then the triangles are congruent.

Diagram:



$\angle A \cong \angle D$
$\angle B \cong \angle E$
$\overline{BC} \cong \overline{EF}$

HYPOTENUSE-LEG (HL) CONGRUENCE THEOREM: If the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the triangles are $\cong$.



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