Math 2

Quiz Fiday

☆ Hand in
Hw Packet
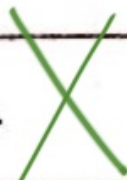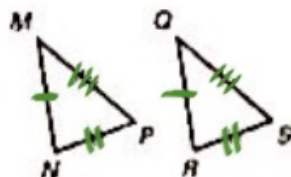
Vocabulary –

Midpoint –

Reflexive Property –

SIDE-SIDE-SIDE (SSS) CONGRUENCE POSTULATE

If three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.

If Side $\overline{MN} \cong \overline{QR}$,

Side $\overline{NP} \cong \overline{RS}$, and
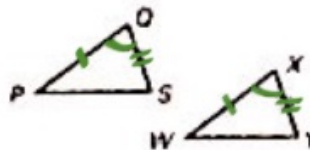
Side $\overline{PM} \cong \overline{SQ}$,

then $\triangle MNP \cong \triangle QRS$

SIDE-ANGLE-SIDE (SAS) CONGRUENCE POSTULATE

If two sides and the included angle of one triangle are congruent to two sides and the included angle of a second triangle, then the two triangles are congruent.

If Side $\overline{PQ} \cong \overline{WX}$.

Angle $\angle Q \cong \angle X$, and
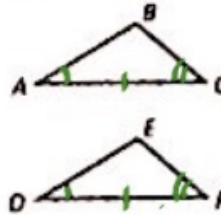
Side $\overline{QS} \cong \overline{XY}$,

then $\triangle PQS \cong \triangle WXY$.

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 a second triangle,
then the two triangles are congruent.

If   Angle $\angle A \cong \angle D$,

   Side $\overline{AC} \cong \overline{DF}$, and

   Angle $\angle C \cong \angle F$,

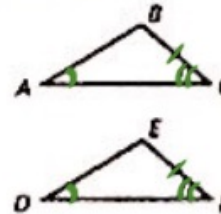then $\triangle ABC \cong \triangle DEF$.

No

AAA

SSA

ASS

ANGLE-ANGLE-SIDE (AAS) CONGRUENCE THEOREM

If two angles and a nonincluded side of
one triangle are congruent to two angles
and the corresponding nonincluded side
of a second triangle, then the two triangles
are congruent.

If   Angle $\angle A \cong \angle D$,

   Angle $\angle C \cong \angle F$, and

   Side $\overline{BC} \cong \overline{EF}$,

then $\triangle ABC \cong \triangle DEF$.
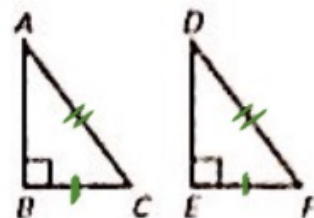
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④ SAS

⑤ vertical ∡'s ≅

ASA

Examples:

① SAS

② SSS

③ AAS

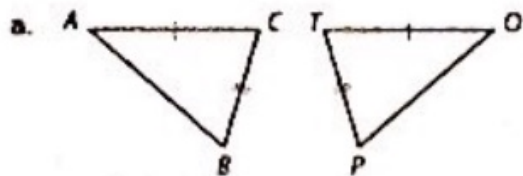## THEOREM 4.8: HYPOTENUSE-LEG (HL) CONGRUENCE THEOREM

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 two triangles are congruent.
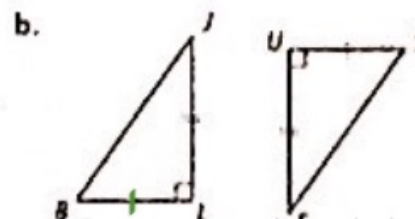
If $\overline{BC} \cong \underline{EF}$ and $\overline{AC} \cong \underline{DF}$, then $\triangle ABC \cong \triangle \underline{DEF}$

Practice Problems

Decide whether there is sufficient evidence to prove both triangles are equal. If so, name the congruence postulate or theorem, then write the statement of congruence.
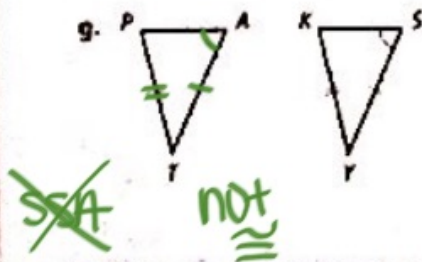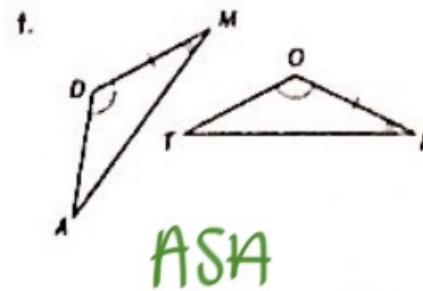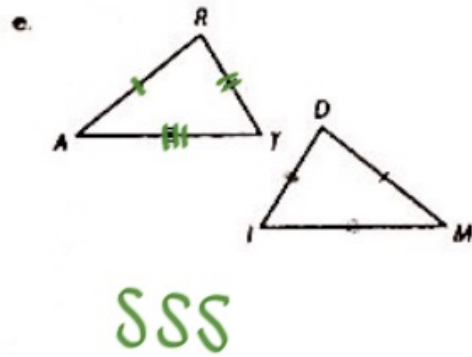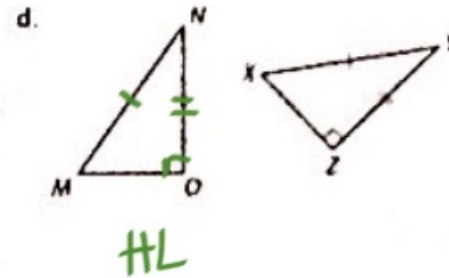
a.

Not $\cong$

b.

SAS

c.

AAS

d.

HL

e.

SSS

f.

ASA

g.

~~SSA~~ not ≅

h.

AAS