

Math 2

Quiz Friday

★ Hand in
HW Packet

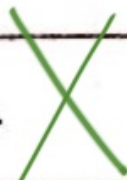
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Vocabulary -

Midpoint -

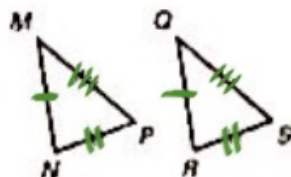
Reflexive Property -



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 $\overline{PM} \cong \overline{SQ}$,

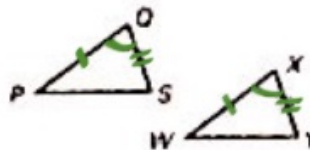


then $\triangle MNP \cong \triangle QRS$

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 $\overline{QS} \cong \overline{XY}$,



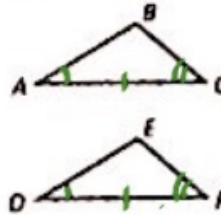
then $\triangle PQS \cong \triangle WXY$.

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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 $\triangle ABC \cong \triangle DEF$.

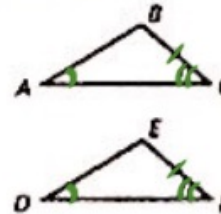


NO
 AAA
 SSA
 ASS

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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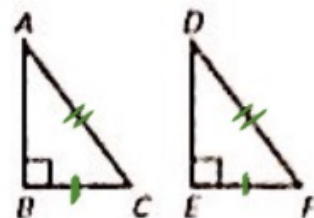
The image contains several geometric diagrams illustrating triangle congruence criteria:

- Top Left:** A quadrilateral $UDST$ with diagonal UT . $\angle U$ and $\angle T$ are marked with double arcs, and US and DT are marked with single tick marks.
- ④:** Two right-angled triangles PMO and RSO . MO and RO are marked with double tick marks, and PO and SO are marked with single tick marks. Right angle symbols are at O . Labeled **SAS**.
- ⑤:** Two triangles RSV and ISV sharing vertex V . $\angle R$ and $\angle I$ are marked with single arcs, and $\angle S$ and $\angle S$ are marked with double arcs. RV and IV are marked with single tick marks. Labeled **ASA**. Handwritten note: "Vertical \angle 's \cong ".
- ① Examples:** Two triangles ABC and ADC sharing side AC . AB and AD are marked with single tick marks, and BC and DC are marked with double tick marks. Labeled **SAS**.
- ②:** Two triangles ZYX and WYX sharing side YX . ZY and WY are marked with single tick marks, and ZX and WX are marked with double tick marks. Labeled **SSS**.
- ③:** A triangle ABD with altitude BC . BC is marked with a single tick mark, and $\angle C$ and $\angle C$ are marked with single arcs. Labeled **AAS**.

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THEOREM 4.8: HYPOTENUSE-LEG (HL) CONGRUENCE THEOREM

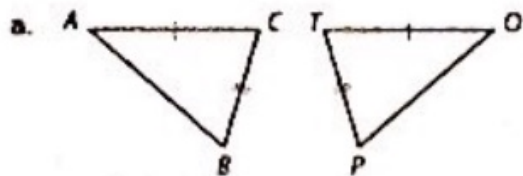
If the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the two triangles are congruent.



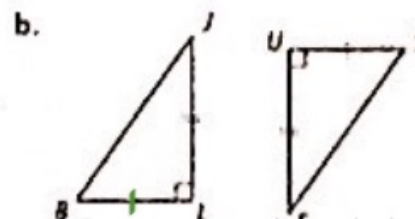
If $\overline{BC} \cong \overline{EF}$ and $\overline{AC} \cong \overline{DF}$, then $\triangle ABC \cong \triangle DEF$.

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.

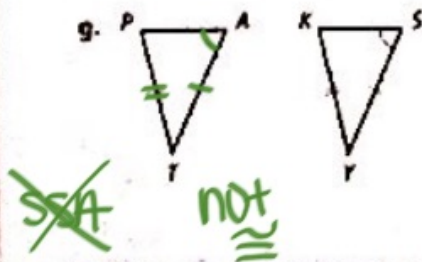
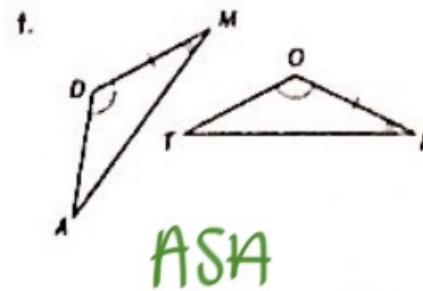
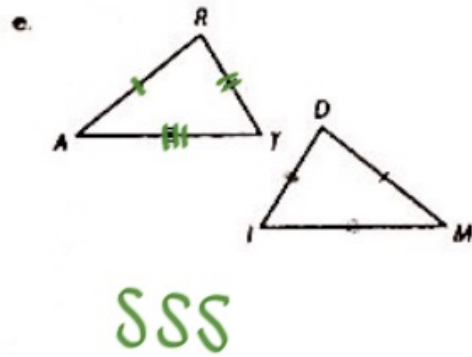
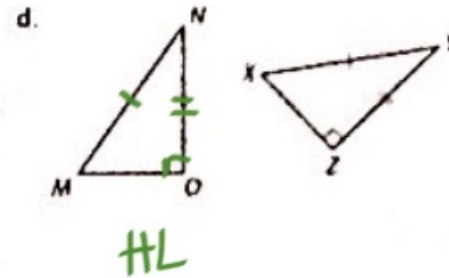
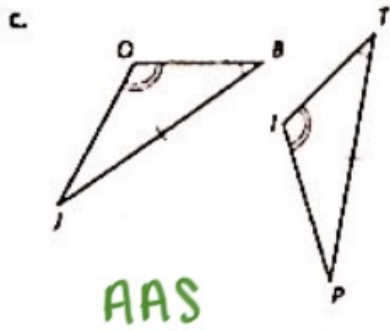


NOT \cong



SAS





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