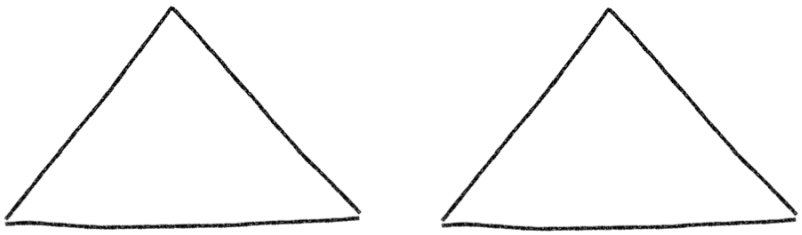
M-G Geometry Week 18 2/6

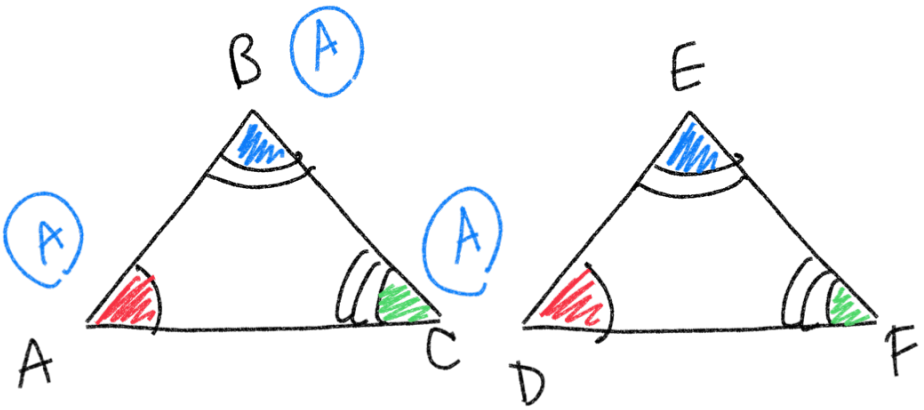


similar triangles

"proportional"

equal angles,

but not equal sides



$\measuredangle A \cong \measuredangle D$

$\measuredangle B \cong \measuredangle E$

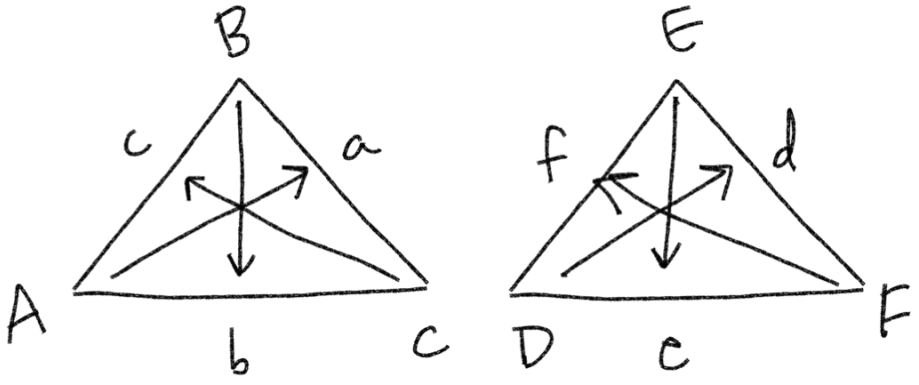
$\measuredangle C \cong \measuredangle F$

$\triangle ABC$ is similar to $\triangle DEF$

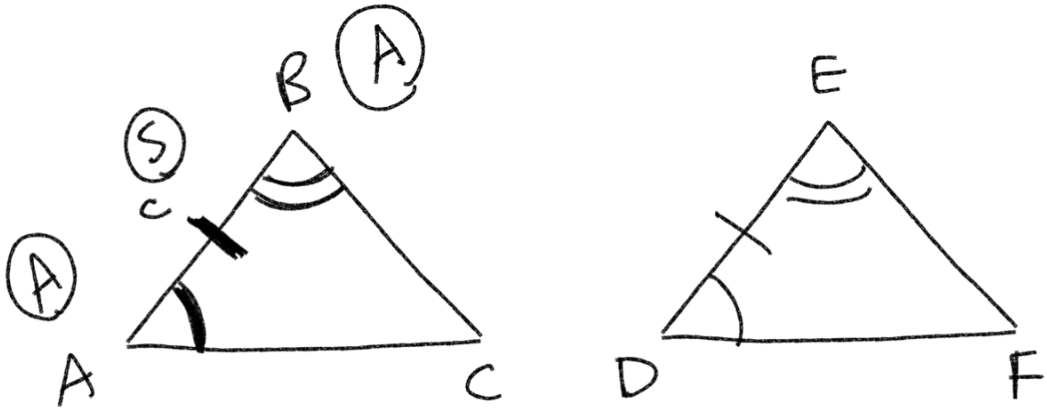
$\triangle ABC \not\cong \triangle DEF$

AAA similarity, but not CONGRUENCY

① YOU NEED AT LEAST ONE SIDE FOR TRIANGLE CONGRUENCY!



Capitals for angles
Lowercase for sides

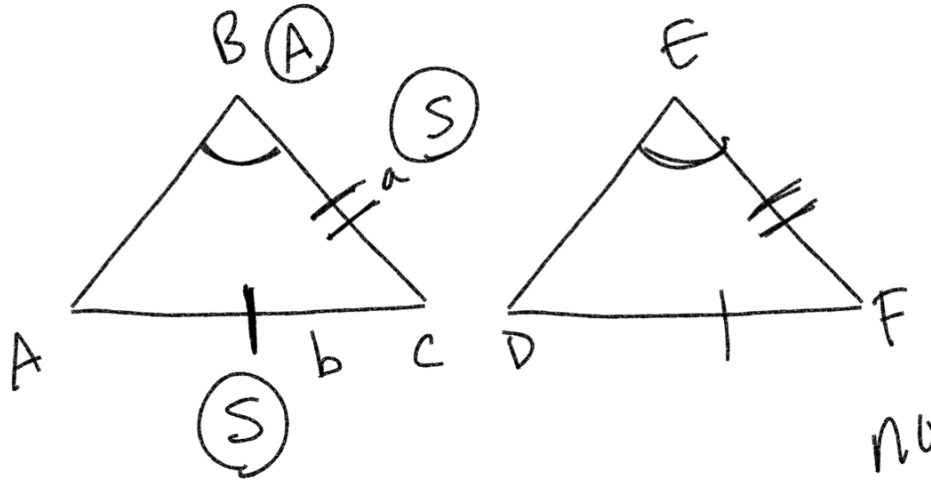


A B c

$\triangle ABC \cong \triangle DEF$

ASA

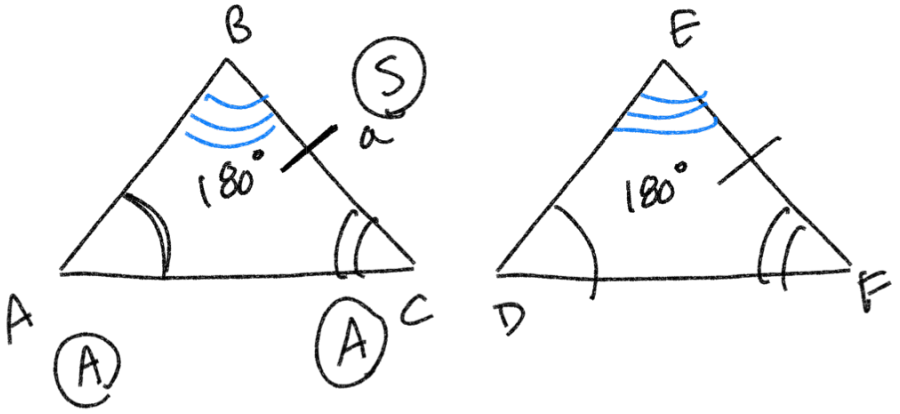
(2) You Need at least <u>one</u> representative from each angle-side pair (Letter) for triangle congruency.



B a b

~~ASS~~

not a congruency



AaCB

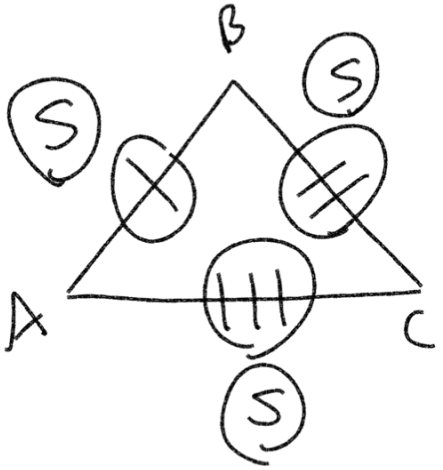
$A + B + C = 180$

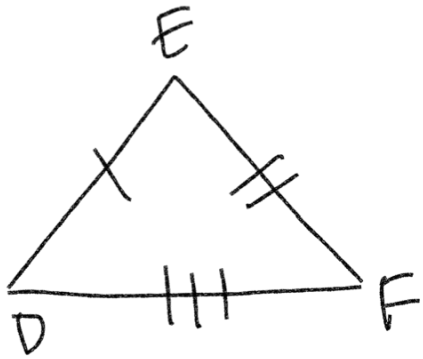
$D + E + F = 180$

AAS

If you have 2 congruent angles, you really have 3.

$\triangle ABC \cong \triangle DEF$

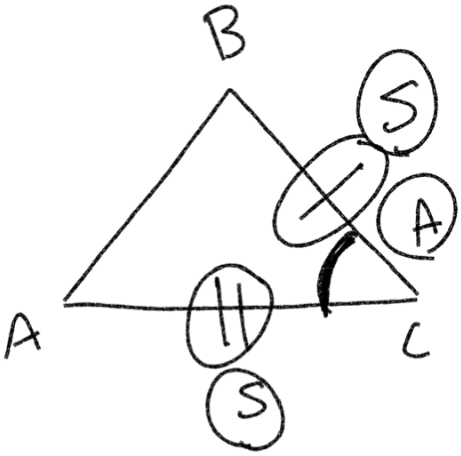


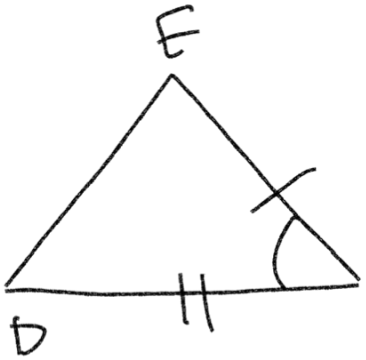


cab

SSS

triangle congruency





aCb

SAS

side-angle-side

Congruencies: SSS SAS ASA AAS

similarity: AAA

↑ not an optim!

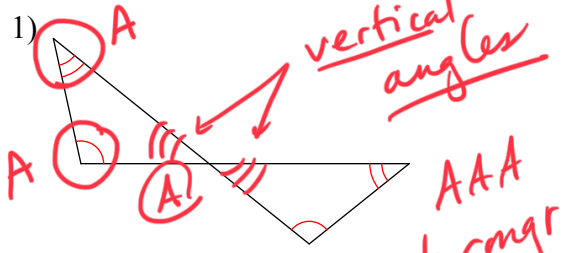
Geometry Name_____ ID: 1

Assignment

Date_____ Period____

Determine if the two triangles are congruent. If they are, state how you know.

1)



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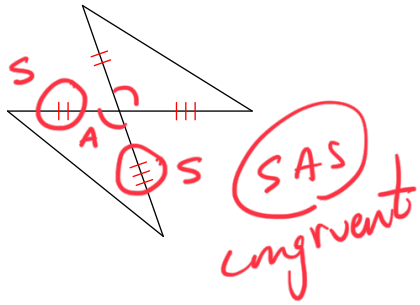

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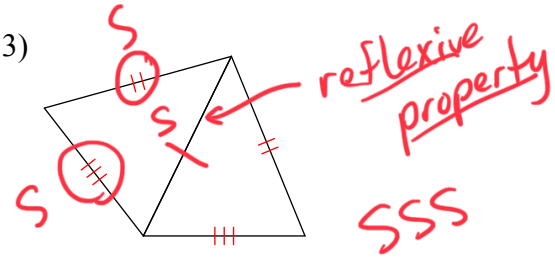

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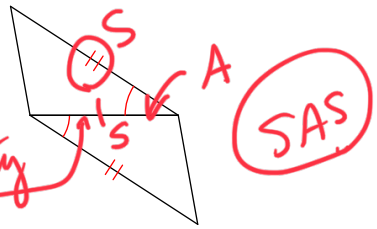

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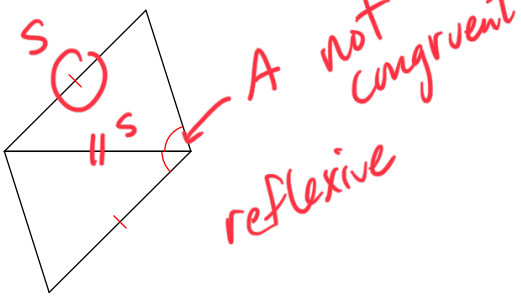

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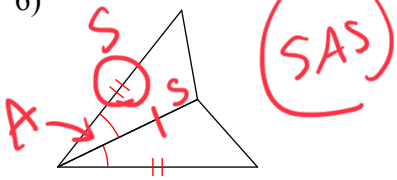

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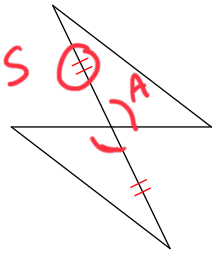

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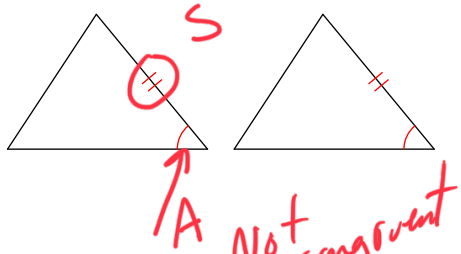

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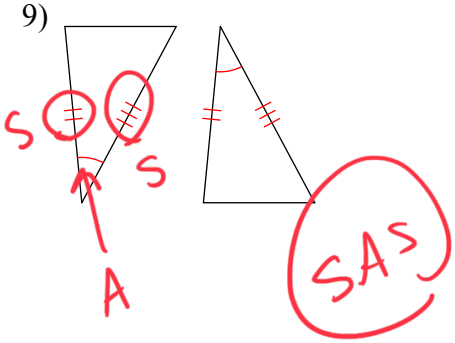

10)