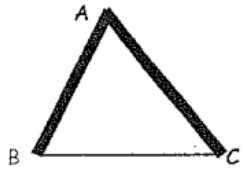
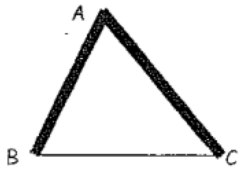
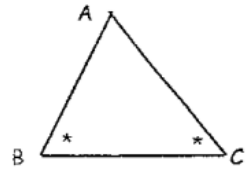
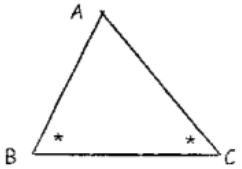
Proving Triangle Congruence

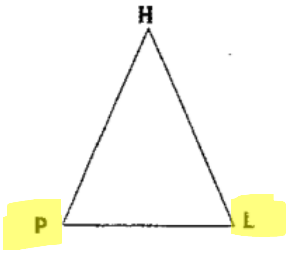
Vocabulary	Definition	Example	Counterexample
Included Angle	an angle that is between two marked sides. The vertex of the angle is the point where the two marked sides meet.		
Included Side	a side that is between two marked angles. There are marked angles at the endpoints of each side.		

Ex 1 IDENTIFY and NAME the indicated parts using the picture at the right

a.) The side opposite ∠P is $\overline{HL}$.

b.) The angle included by $\overline{HP}$ and $\overline{LH}$ is $\angle H$.

c.) The side included by ∠P and ∠L is $\overline{PL}$.



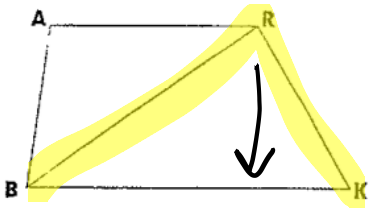
Ex 2 IDENTIFY and NAME the indicated parts using the picture at the right

a.) The side included by ∠A and ∠ARB is $\overline{AR}$.

b.) The angles opposite $\overline{BR}$ are $\angle A$ and $\angle K$.

c.) The angle included by $\overline{RB}$ and $\overline{KB}$ is $\angle RBK$.

d.) The side opposite ∠KRB is $\overline{KB}$.

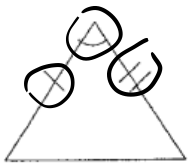


Ex 3 Triangle Congruence Patterns

Determine which pattern - **SSS, SAS, ASA, AAS** - has been marked for you.

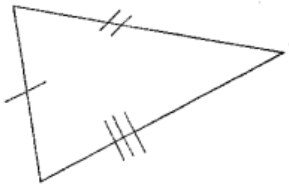
If the combination is not any of these, write "NONE".

a.)



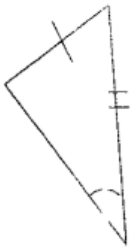
a.) SAS

b.)



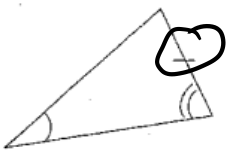
b.) SSS

c.)



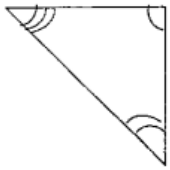
c.) NONE

d.)



d.) AAS

e.)



e.) NONE

f.)

f.) ASA

Ex 4 Triangle Congruence Patterns with TWO triangles

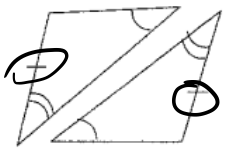
Look at the two triangles in each picture.
Can you mark any additional parts congruent?

Determine which triangle congruence postulate - **SSS, SAS, ASA, AAS** - has been marked for you.

(Note: Both triangles must have the SAME pattern marked)

If no special pattern exists for **both triangles**, write NEI (Not Enough Information)

a.)

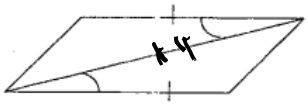


a.) AAS

b.)

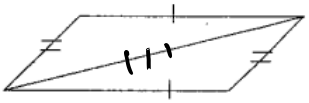
b.) NONE

c.)



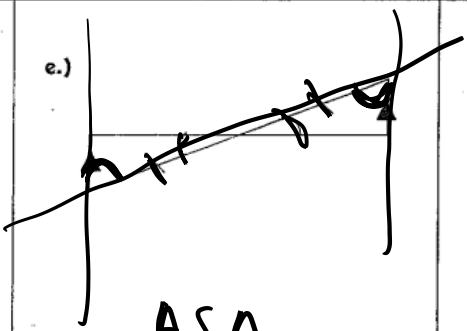
c.) SAS

d.)



d.) SSS

e.)



e.) ASA

f.)

f.) NONE