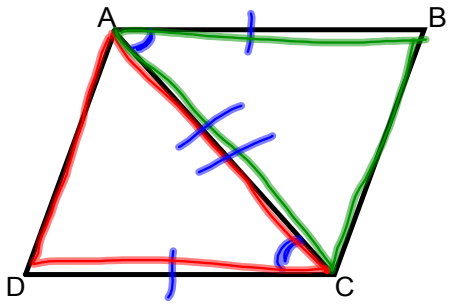
D.I.R.T.

Are the following triangles congruent? If so, state the **CONGRUENCE**. Then state the **REASON**.

1)

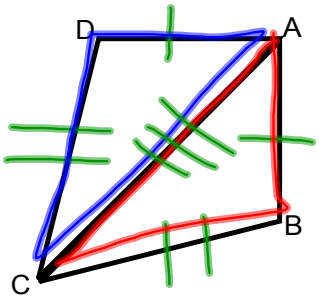


GIVEN: m<BAC=m<DCA, AB CD — **Code and Label the picture.**

Δ ABC Δ CDA

by SAS

2)



GIVEN: AD AB, DC BC — **Code and Label the picture.**

Δ ABC Δ ADC

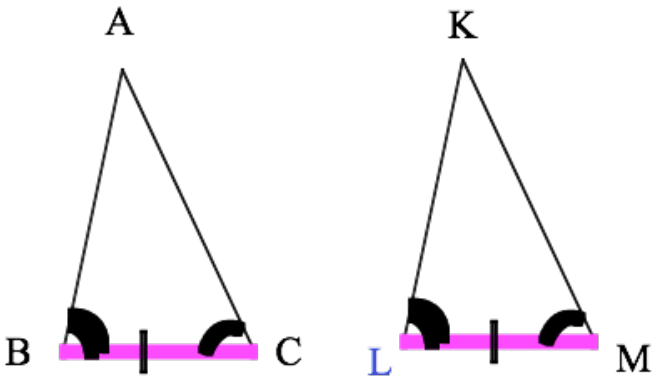
by SSS

4.3 Triangle Congruence by ASA and AAS

Objective: To prove two triangles congruent using the ASA Postulate and the AAS Theorem

M.2.B.
Performance Standard 3.4, 3.5 DOK-1
Knowledge MA 3

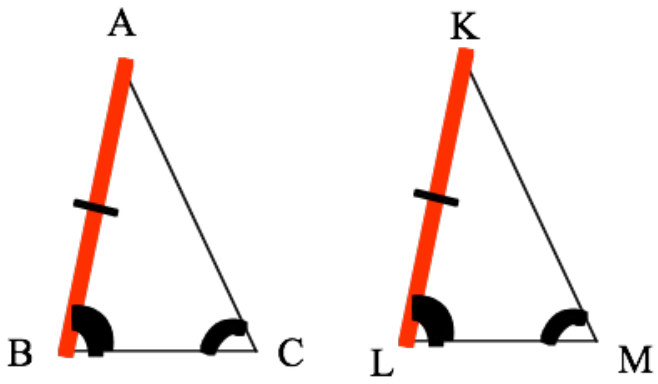
CONGRUENT TRIANGLES by ASA



△ABC ≅ △KLM by *ASA*

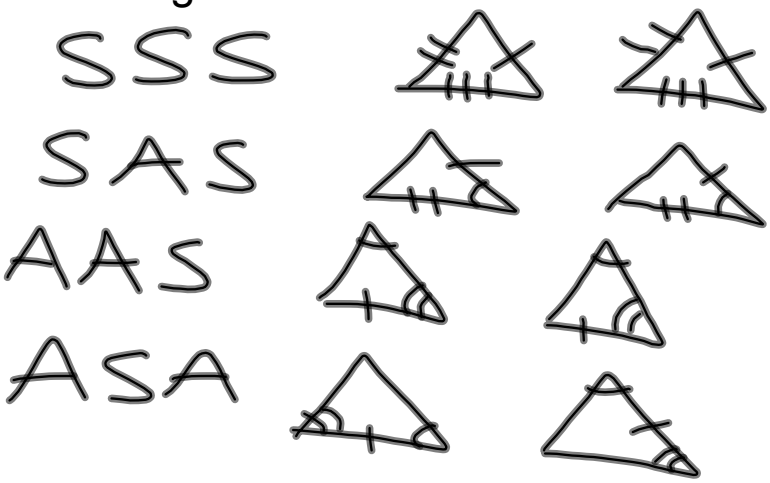
ASA- Angle-side-Angle Postulate-- If 2 angles and one included side are congruent to 2 angles and one included side of another triangle, then the triangles are congruent.

CONGRUENT TRIANGLES by AAS



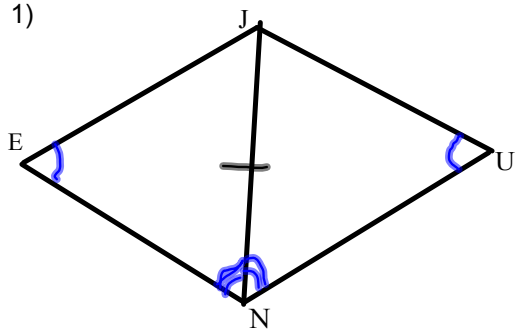
△ABC ≅ △KLM by *AAS*

AAS- Angle-Angle-Side Postulate-- If 2 angles and a nonincluded side of one triangle are congruent to 2 angles and a nonincluded side of another triangle, then the triangles are congruent.



Are the triangles congruent? Justify.
If they are, then write a congruence statement.

1)

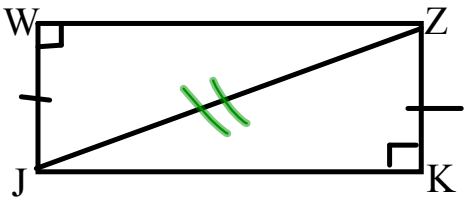


Δ JUN Δ JEN

by AAS

SSS
ASA
SAS
AAS

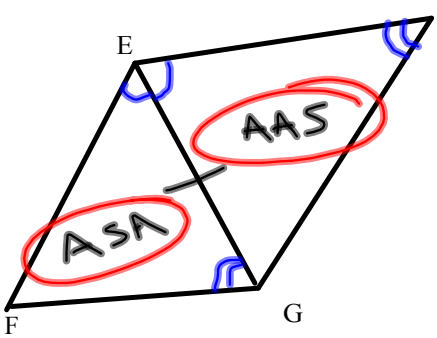
2)



Δ JKZ Δ X

by NOT congruent (cannot spell "bad word")

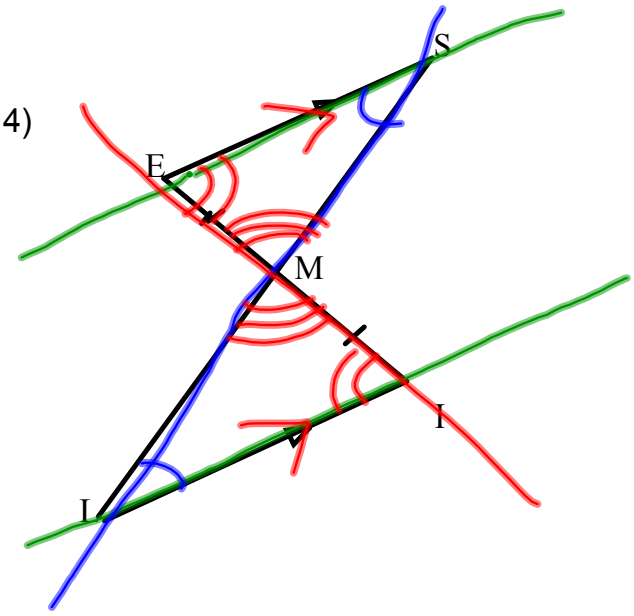
3)



Δ HEG Δ X

by NOT ≅

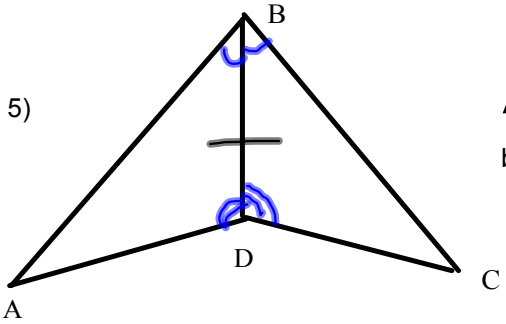
4)



Δ SME Δ LMI

by ASA or AAS

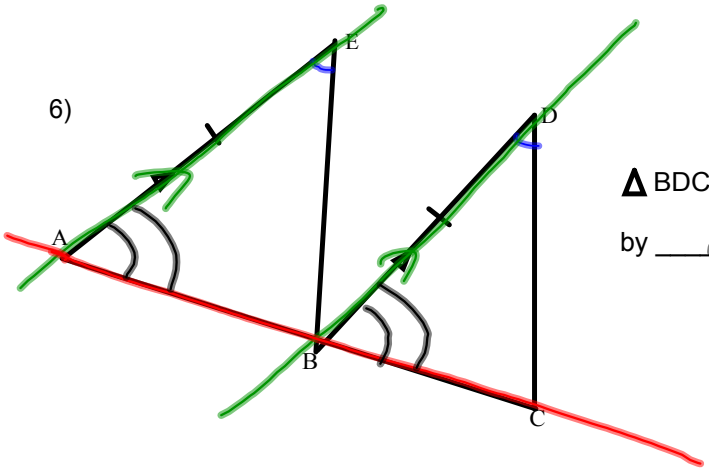
5)



Δ BCD Δ BAD

by ASA

6)



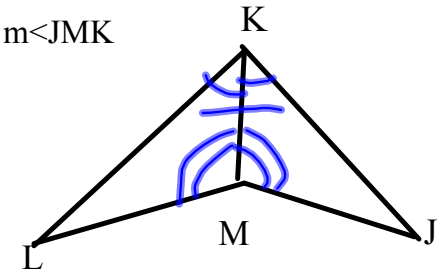
Δ BDC Δ AEB

by ASA

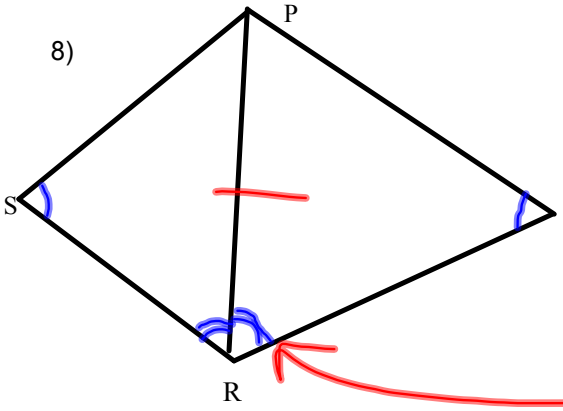
Code each picture. Determine why the triangles are congruent.

7) Given: m<LKM = m<JKM, m<LMK = m<JMK
Prove: ΔLKM = ΔJKM

WHY? ASA



8)



Given: <S=<Q, RP bisects <SRQ
Prove: ΔSRP =ΔQRP

WHY? AAS

Q

"cut in half"

Worksheet #1