

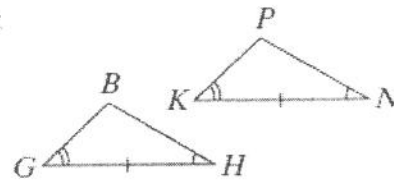
Notesheet 4-3: Triangle Congruence Postulates ASA and AAS

We have used and discussed two shortcuts for proving triangles congruent. Today we will learn about two others.

Angle-Side-Angle Congruence Postulate (ASA)

If two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then

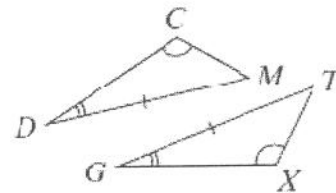
$$\triangle \boxed{} \cong \triangle \boxed{}$$



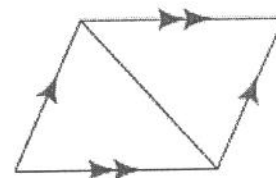
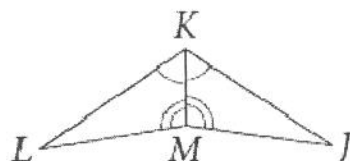
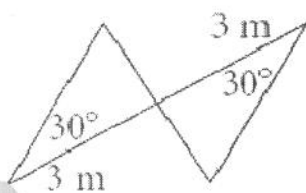
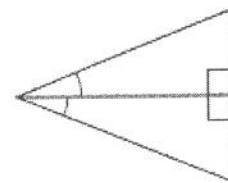
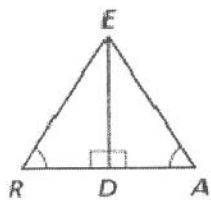
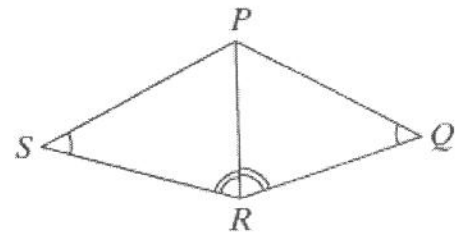
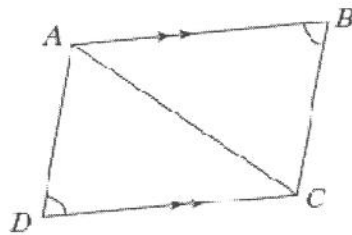
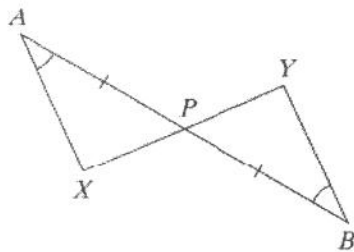
Angle-Angle-Side Congruence Postulate (AAS)

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

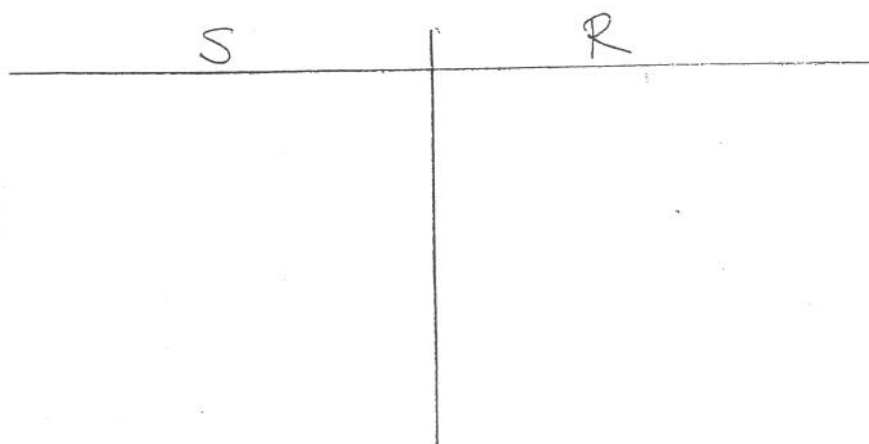
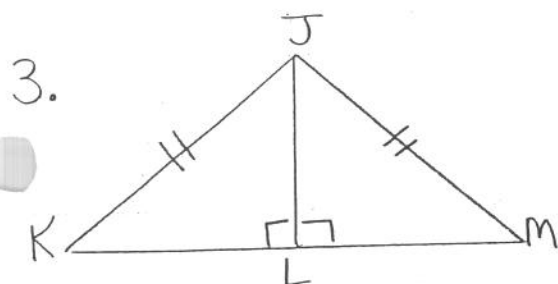
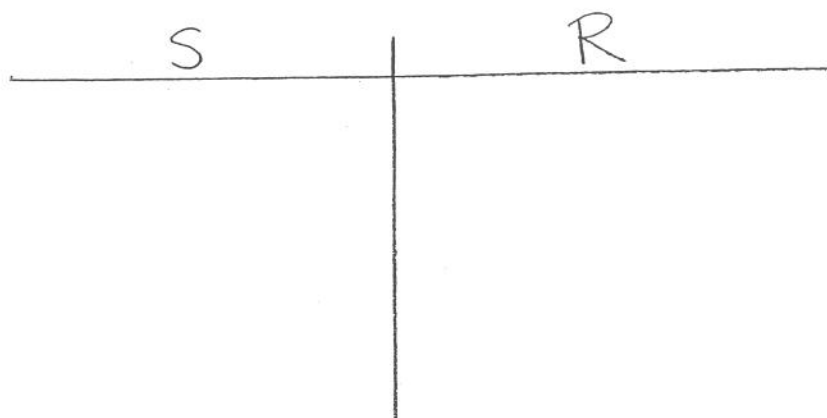
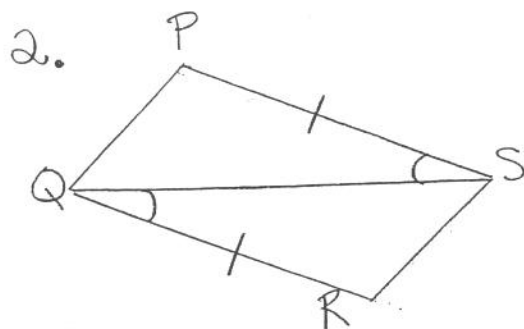
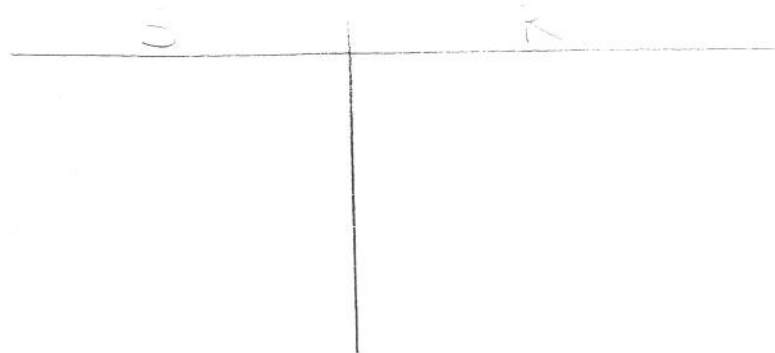
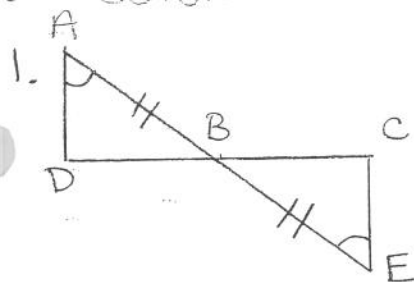
$$\triangle \boxed{} \cong \triangle \boxed{}$$



Which congruence postulate would you use to show that the triangles are congruent?



2 Column Proofs



Statements + Reasons - Cut each piece out & place into the correct place in the above proofs.

given

Vertical Angles

$$\angle A \cong \angle E$$

$$\triangle KJL \cong \triangle MJL$$

given

Reflexive Property

$$\angle PSQ \cong \angle RQS$$

$$\overline{KJ} \cong \overline{JM}$$

given

Reflexive Property

$$\overline{QS} \cong \overline{QS}$$

$$\overline{JL} \cong \overline{JL}$$

given

SAS

$$\angle ABD \cong \angle CBE$$

$$\overline{AB} \cong \overline{BE}$$

given

HL

$$\triangle QRS \cong \triangle SPQ$$

$$\overline{PS} \cong \overline{QR}$$

given

ASA

$$\triangle ABD \cong \triangle EBC$$

$\angle KJL + \angle MJL$
are right angle