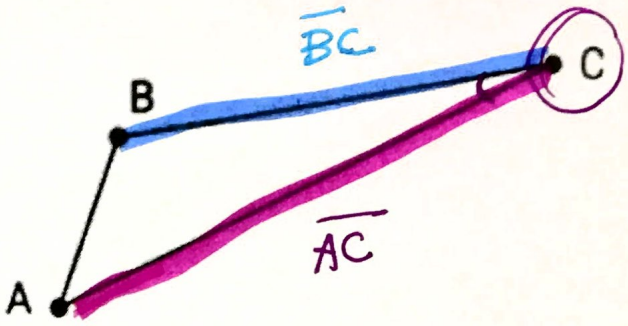
Congruent: "equal" exactly the same measurement

$\cong$

Included Angle: angle between 2 sides

$\angle C$ is the included $\angle$ between $\overline{BC}$ & $\overline{AC}$

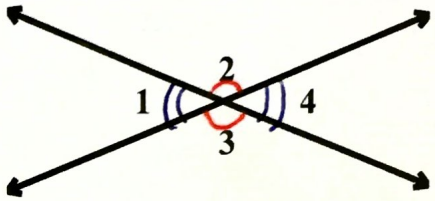


Shared Side: a side 2 triangles share

$\overline{RT}$ is a shared side

Vertical Angles: $\angle$'s directly across an intersection when 2 lines cross

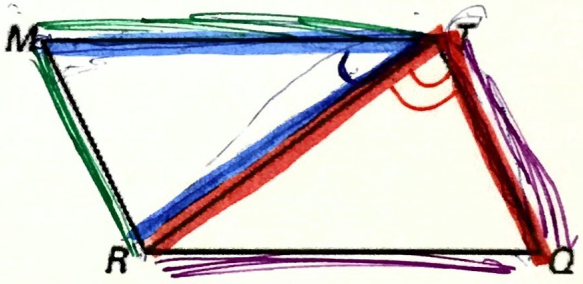
* They are ALWAYS $\cong$



Ex. 1: Use the diagram to name the included angle between the pair of sides given.

a) $\overline{MT}$ and $\overline{TR}$ — $\angle MTR$ or $\angle RTM$

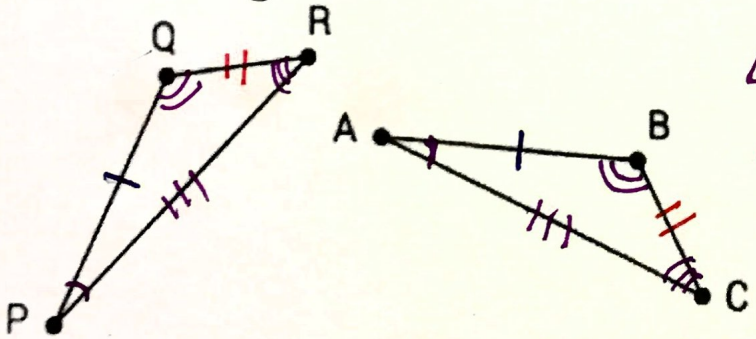
b) $\overline{TQ}$ and $\overline{RT}$ — $\angle QTR$ or $\angle RTQ$



c) $\overline{MR}$ and $\overline{TM}$ — $\angle RMT$ or $\angle TMR$ or $\angle M$

d) $\overline{TQ}$ and $\overline{QR}$ — $\angle TQR$ or $\angle RQT$ or $\angle Q$

Ex. 2: Given $\triangle ABC \cong \triangle PQR$, label and name the pairs of corresponding sides and angles.



ANGLES

$\angle A \cong \angle P$

$\angle B \cong \angle Q$

$\angle C \cong \angle R$

SIDES

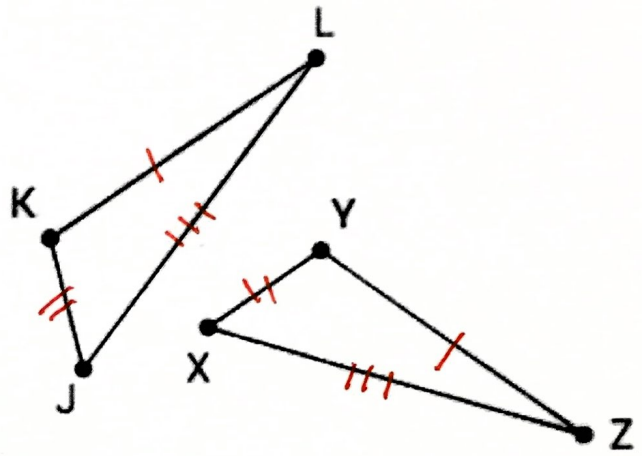
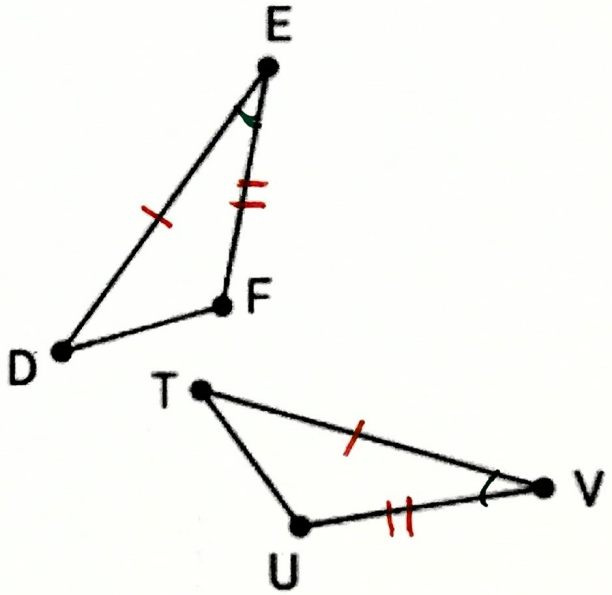
$\overline{AB} \cong \overline{PQ}$

$\overline{BC} \cong \overline{QR}$

$\overline{AC} \cong \overline{PR}$

Notes 8-5

Sec 1 H **SSS and SAS Triangle Congruence** **Unit 8**

Postulate/Theorem	Picture
Side-Side-Side (SSS) Congruence Postulate: If all corresponding sides on BOTH triangles are congruent, then triangles are $\cong$. $\overline{JK} \cong \overline{XY}$ $\overline{KL} \cong \overline{YZ}$ $\overline{JL} \cong \overline{XZ}$ so $\triangle JKL \cong \triangle XYZ$	
Side-Angle-Side (SAS) Congruence Postulate: If 2 corresponding sides and their included $\angle$ are $\cong$ between 2 triangles, then the 2 triangles are $\cong$ $\overline{DE} \cong \overline{TV}$ $\angle E \cong \angle V$ $\overline{EF} \cong \overline{VU}$ $\triangle DEF \cong \triangle TVU$	

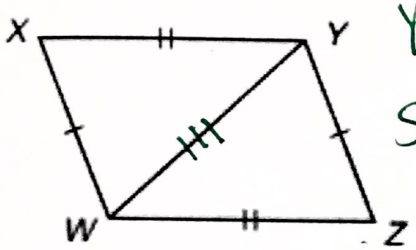
Notes 8-5

Sec 1 H **SSS and SAS Triangle Congruence** **Unit 8**

Decide whether enough information is given to prove that the triangles are congruent. If there is enough information, state the congruence postulate you would use.

① Shared sides
② Vertical ∠'s

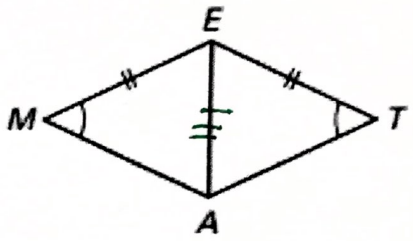
Ex. 3:



Yes!

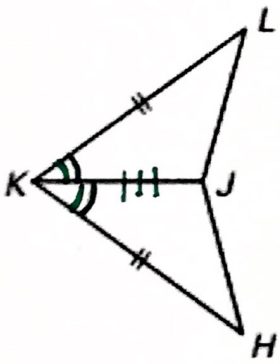
SSS

Ex. 4:



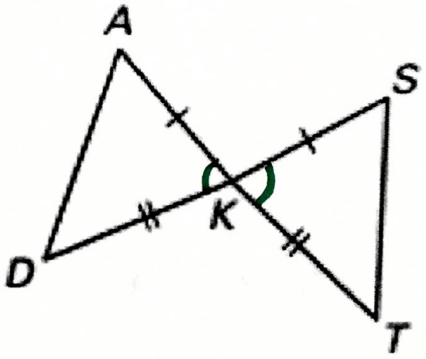
No

Ex. 5:



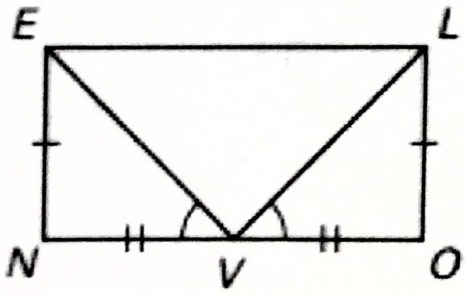
SAS!

Ex. 6:

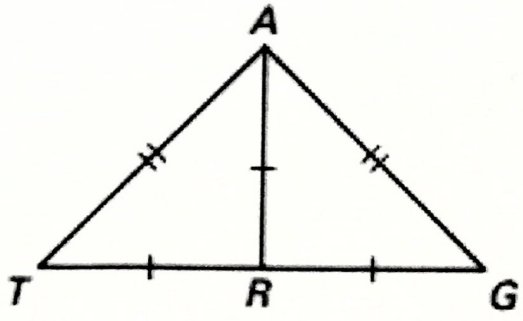


SAS

Ex. 7:

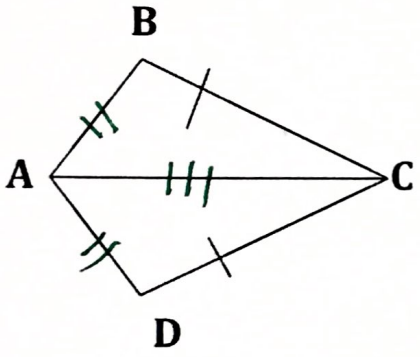


Ex. 8:

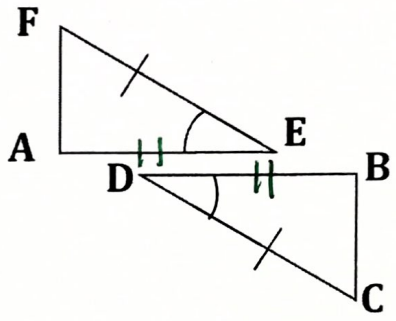


In each of the following pairs of triangles, add the required markings in order to know that the triangles are congruent by the given postulate.

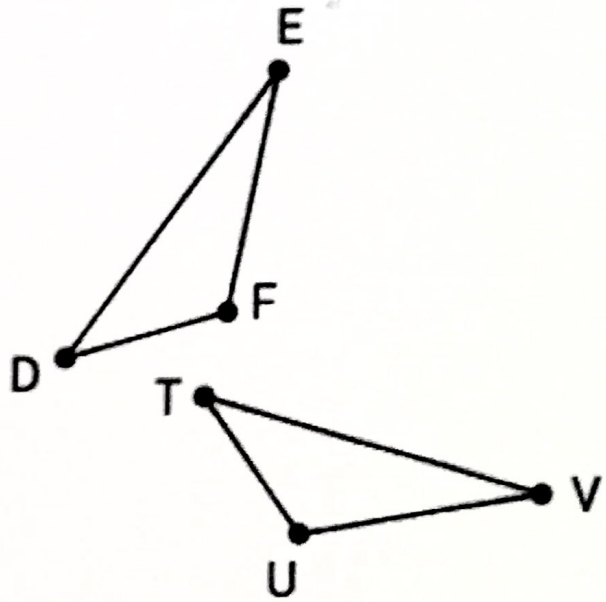
Ex. 9: by SSS



Ex. 10: by SAS



Ex. 11: by SSS



Ex. 12: by SAS