

$$m\angle 7 + m\angle 2 = 180^\circ \text{ SSI}$$

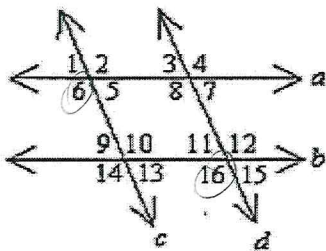
$$2x - 1 + 9x + 16 = 185$$

$$x = 15$$

$$m\angle 7 = 29^\circ$$

$$m\angle 2 = 151^\circ$$

21. If
 $m\angle 2$
 22.



$m\angle 7 = 2x - 1$ and $m\angle 2 = 9x + 16$, solve for x and find $m\angle 7$.

Given $a \parallel b$ and $c \parallel d$ Prove $\angle 6 \cong \angle 16$

$$a \parallel b, c \parallel d$$

$$\angle 6 \cong \angle 8$$

$$\angle 8 \cong \angle 16$$

$$\angle 6 \cong \angle 16$$

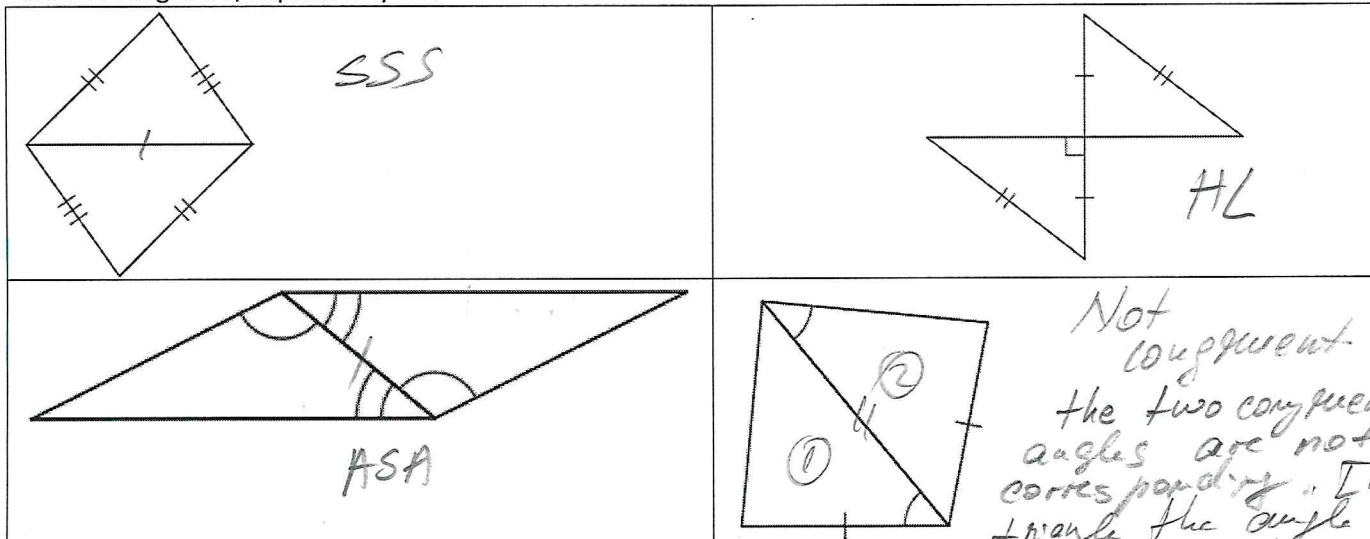
given
 corresp. $\angle$ s, $c \parallel d$
 corresp. $\angle$'s, $a \parallel b$
 transitive prop.

Unit 3 – Triangles and Triangle Congruence

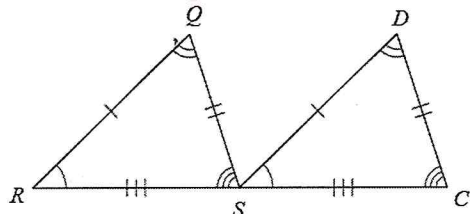
23. Name all the valid postulates/theorems that can be used to prove that two triangles are congruent.

ASA, SAS, HL
 AAS, SSS

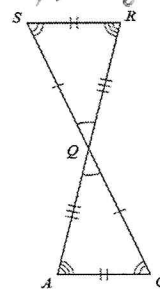
24. For the following triangles, determine whether they are congruent and by which theorem or postulate. If they are not congruent, explain why not.



25. Write a congruent statement for the following triangles:



$\triangle QRS \cong \triangle DSC$



$\triangle QST \cong \triangle QCA$

26. Using the triangle from above left, complete the following congruence statements:

$\angle QRS \cong \angle DSC$; $\angle CDS \cong \angle SQR$; $\overline{DS} \cong \overline{QR}$; $\overline{RS} \cong \overline{SC}$; $\overline{DC} \cong \overline{QS}$