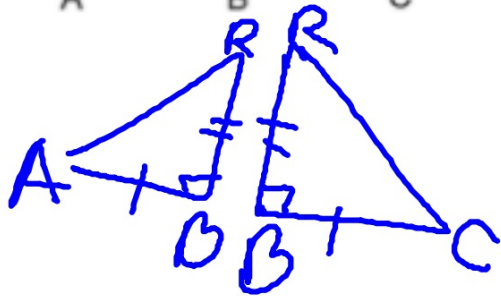
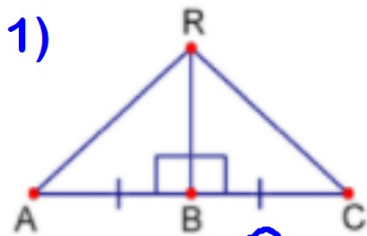


If  $\triangle HGK \cong \triangle QST$ ,  $m\angle G = 3x + 40$ ,  $m\angle K = 4x - 3$ , and  $m\angle S = 6x - 5$ . Find  $x$ .

$$\begin{aligned} 3x + 40 &= 6x - 5 \\ -3x & \quad \quad -3x \\ \hline 40 &= 3x - 5 \\ +5 & \quad \quad +5 \\ \hline 45 &= 3x \\ x &= 15 \checkmark \end{aligned}$$

These triangles are congruent by which postulate?



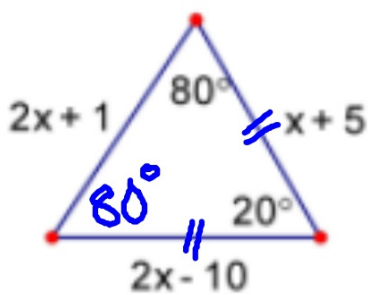
SAS



AAS

$\triangle ABC \cong \triangle PQR$

Find  $x$ .



ITT states:

two sides  $\cong$ , opposite  
 $\angle$ 's  $\cong$

Converse of ITT is:

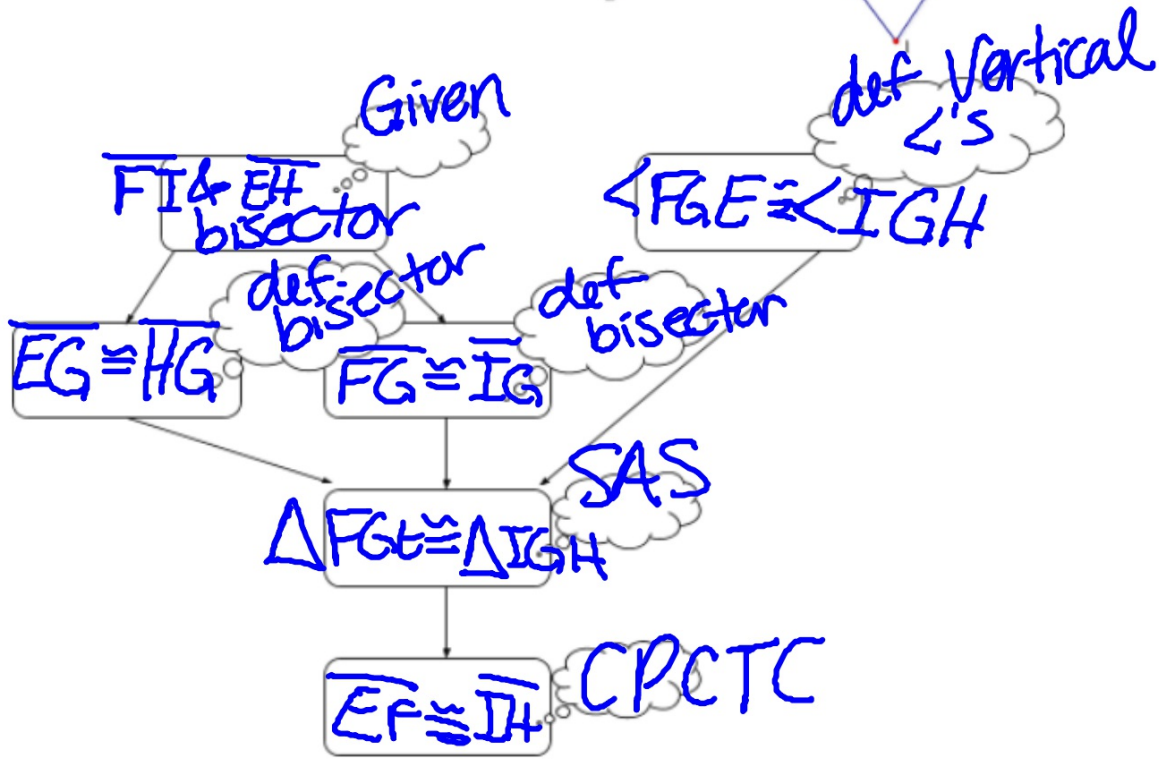
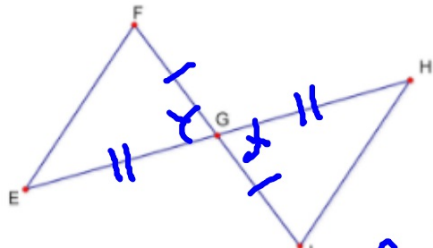
two  $\angle$ 's  $\cong$ , two  
opposite sides  $\cong$

$$80 + 20 = 100$$

$$180 - 100 = 80$$

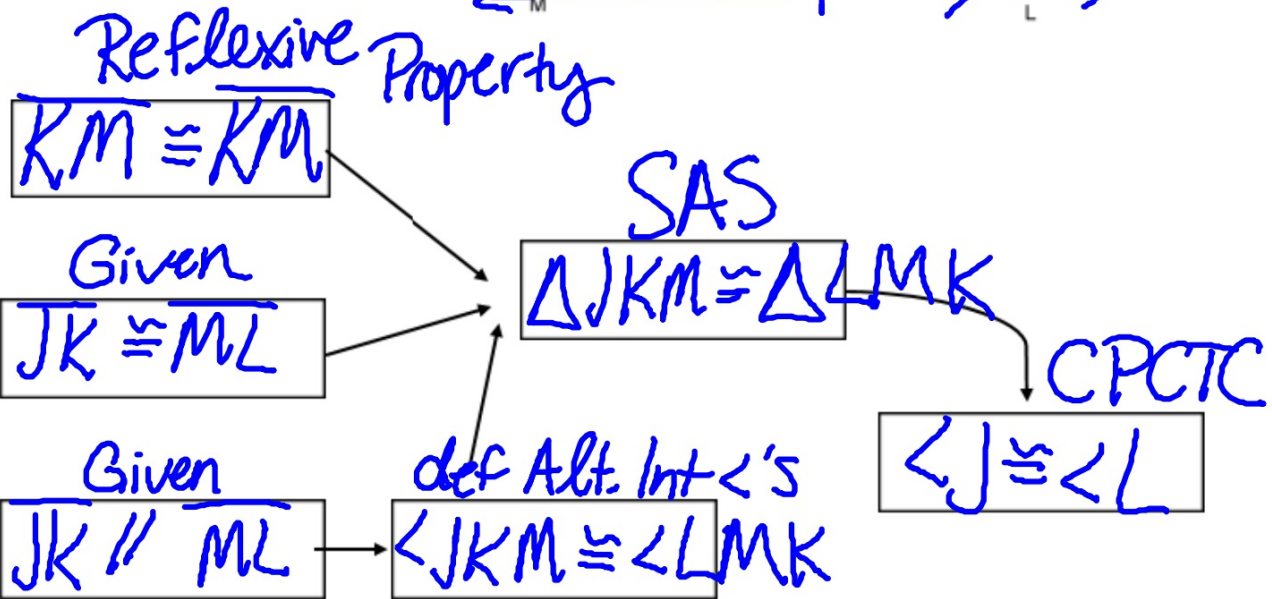
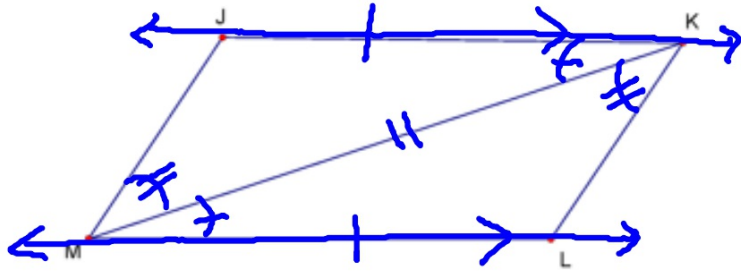
Ex 5) Given:  $\overline{FI}$  and  $\overline{EH}$  bisect each other,

Prove:  $\overline{EF} \cong \overline{IH}$



Ex 3) Given:  $\overline{JK} \parallel \overline{ML}$   
 $\overline{JK} \cong \overline{ML}$

Prove:  $\angle J \cong \angle L$



Homework is Pages 12 & 13