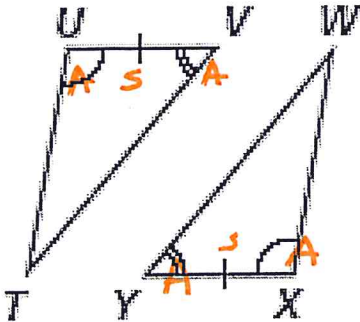


ASA and AAS

Prove that the below triangles are congruent by ASA or AAS.

1-



Congruent parts:

$$UV \cong XY$$

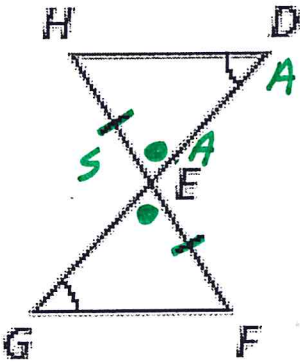
$$\angle V \cong \angle Y$$

$$\angle U \cong \angle X$$

Congruence Statement:

$$\Delta TUV \cong \Delta WXY$$

Reason: ASA



Congruent parts:

$$\angle D \cong \angle G$$

$$\angle DEH \cong \angle GEF \text{ Vertical angle.}$$

$$EH \cong EF$$

Congruence Statement:

$$\Delta GEF \cong \Delta DEH$$

Reason: AAS

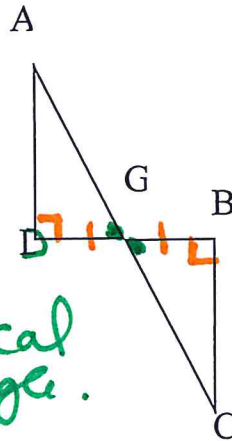
3- Given: $\angle D$ and $\angle B$ are right angles

G is the midpoint of \overline{DB}

Prove: $\Delta ADG \cong \Delta CBG$

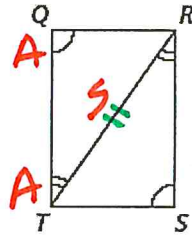
$$\left. \begin{array}{l} \angle D \cong \angle B \text{ right angle} \\ DG \cong BG \text{ midpoint} \\ \angle AGD \cong \angle CGB \text{ Vertical angle.} \end{array} \right\}$$

$$\Delta ADG \cong \Delta CBG \text{ by ASA}$$



4- Given: $\angle Q \cong \angle S$, $\angle TRS \cong \angle RTQ$

Prove: $\triangle QRT \cong \triangle STR$



$$\angle Q = \angle S$$

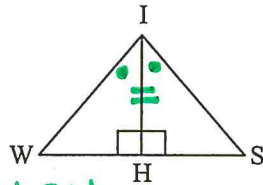
$$\angle QTR \cong \angle SRT$$

$TR \cong RT$ Shared Side

$\triangle QRT \cong \triangle STR$ by AAS.

5- Given: IH Bisects $\angle WIS$

✓ $\angle WIH \cong \angle HIS$
Bisect



✓ $IH \cong IH$ shared side

✓ $\angle IHW \cong \angle IHS$ right angle.

$\triangle IHW \cong \triangle IHS$ by ASA.