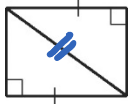


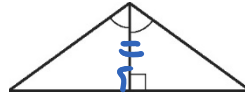
4.6 HOMEWORK

NAME: KEY

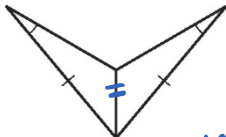
Write which postulate, if any, can be used to prove the pair of triangles congruent.



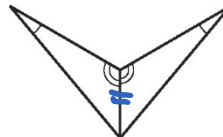
1. HL



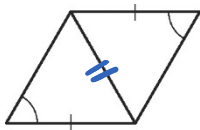
2. ASA



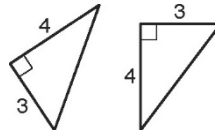
3. Not \cong



4. AAS



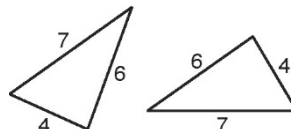
5. Not \cong



6. SAS

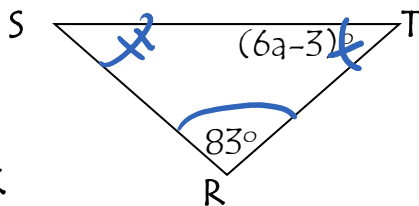
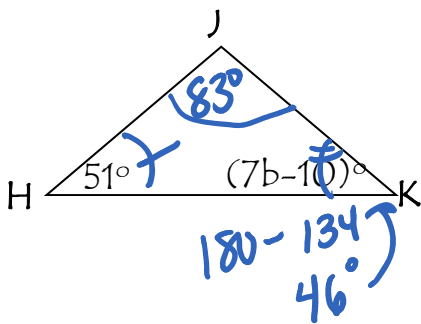


7. Not \cong



8. SSS

9) Given $\triangle HJK \cong \triangle TRS$, find a and b .



$$51 = 6a - 3$$

$$54 = 6a$$

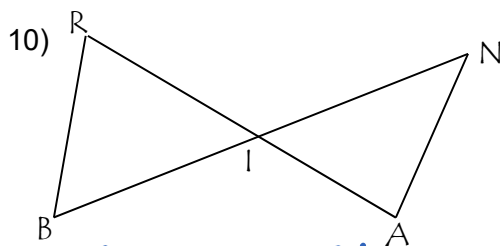
$$a = 9$$

$$7b - 10 = 46$$

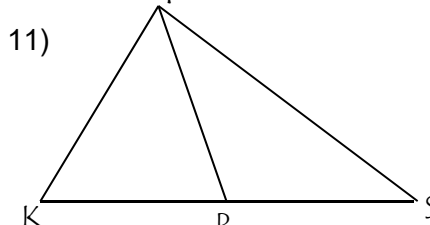
$$7b = 56$$

$$b = 8$$

For 10-11, list what you can ASSUME based on the given diagrams.

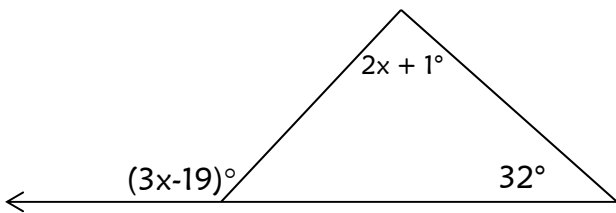


$\angle RIB \cong \angle NIA$
(vert \angle s \cong)



$\overline{KR} \cong \overline{KR}$ & $\angle KRI$ is supplementary to $\angle SRI$

12) Find x



$$3x - 19 = 32 + 2x + 1$$

$$3x - 19 = 2x + 33$$

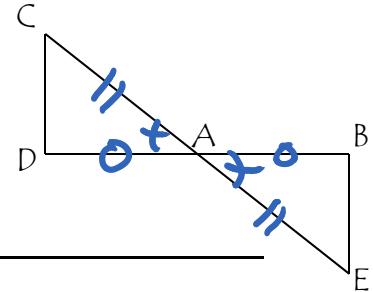
$$x = 52$$

13. PROOF

Given: $\overline{AC} \cong \overline{AE}$

A is the midpoint of \overline{DB}

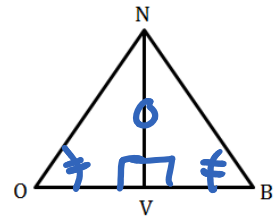
Prove: $\triangle ACD \cong \triangle AEB$



Statements	Reasons
S (1) $\overline{AC} \cong \overline{AE}$	(1) Given
(2) A midpt. of \overline{DB}	(2) "
S (3) $\overline{DA} \cong \overline{AB}$	(3) midpt. \Rightarrow 2 \cong segs.
A (4) $\angle CAD \cong \angle BAE$	(4) Vert. \angle 's are \cong .
(5) $\triangle ACD \cong \triangle AEB$	(5) SAS (1, 4, 3)

Given: $\overline{NV} \perp \overline{OB}$
 $\angle O \cong \angle B$

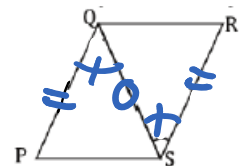
Prove: $\triangle ONV \cong \triangle BNV$



Statements	Reasons
(1) $\overline{NV} \perp \overline{OB}$	(1) Given
(2) $\angle NVO$ and $\angle NVB$ are rt. \angle 's	(2) $\perp \Rightarrow$ rt. \angle 's
A (3) $\angle NVO \cong \angle NVB$	(3) Rt. \angle 's are \cong .
A (4) $\angle O \cong \angle B$	(4) Given
S (5) $\overline{NV} \cong \overline{NV}$	(5) Reflexive Property
(6) $\triangle ONV \cong \triangle BNV$	(6) AAS (3, 4, 5)

Given: $\angle PQS \cong \angle RSQ$
 $\overline{PQ} \cong \overline{RS}$

Prove: $\triangle PQS \cong \triangle RSQ$



Statements	Reasons
A (1) $\angle PQS \cong \angle RSQ$	(1) Given
S (2) $\overline{PQ} \cong \overline{RS}$	(2) "
S (3) $\overline{QS} \cong \overline{QS}$	(3) Reflexive Property
(4) $\triangle PQS \cong \triangle RSQ$	(4) SAS (2, 1, 3)