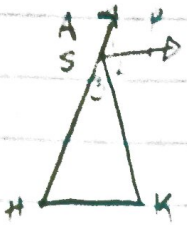
116



given: $\triangle SKH$ is isos w/ $\angle S$ as vertex
$\overline{SP} \parallel \overline{HK}$

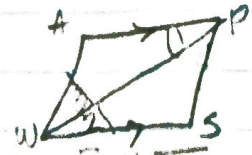
write a 5 step "proof"

* want the new info to work together

$\triangle SKH$ is isos w/ $\angle S$ as vertex → given
→ $\angle H \cong \angle K$ → isos $\triangle$ has $\cong$ base $\angle$'s
$\overline{SP} \parallel \overline{HK}$ → given
→ $\angle 2 \cong \angle K$ → alt. int. $\cong$ when lines are $\parallel$
* only use given a reason if it's actually given
* combination steps → taking multiple lines and using them together to get new info.
$\angle 2 \cong \angle H$ → both $\cong$ to $\angle K$

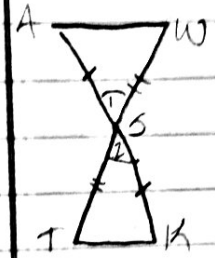
when 2 things are = or $\cong$ to a mutual 3rd thing
$\angle H \cong \angle K$ tells you $\angle 2 \cong \angle H$
$\angle 2 \cong \angle K$
* transitive property

If these 2 statements are true:
$AB + BC = AC$
and
$BC = EF$
you can say:
$AB + EF = AC$
substitution property



given: $\overline{AP} \parallel \overline{WS}$
$\overline{PW}$ bisects $\angle AWS$

5 step "proof"
$\overline{AP} \parallel \overline{WS}$ → given
$\angle 1 \cong \angle 2$ → alt int
$\overline{PW}$ bisects $\angle AWS$ → given
$\angle 3 \cong \angle 2$ → bisector creates $\cong$ $\angle$'s
$\angle 1 \cong \angle 3$ → both $\cong \angle 2$



given: S is mdpt of $\overline{AK}$
$\overline{AK}$ bisects $\overline{WT}$

6 step "proof"

$\angle 1 \cong \angle 2$ → vert. $\angle$'s $\cong$

S is mdpt of $\overline{AK}$ → given

$\overline{AS} \cong \overline{SK}$ → mdpt creates 2 $\cong$ parts

$\overline{AK}$ bisects $\overline{WT}$ → given

$\overline{WS} \cong \overline{ST}$ → bisector makes 2 $\cong$ parts

$\triangle AWS \cong \triangle STK$ → SAS