

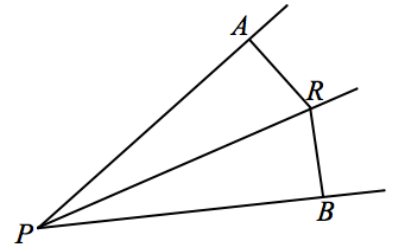
Name \_\_\_\_\_

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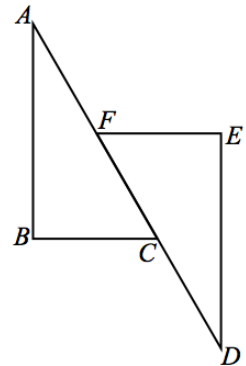
Section \_\_\_\_\_

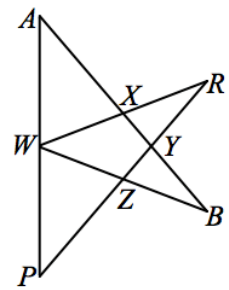
**Geometry Problem Set 4.6R / 4.8L - Use your knowledge of triangle congruence criteria to write proofs for each of the following problems. Use additional paper as necessary.**

1. In the figure,  $\overline{PA} \perp \overline{AR}$  and  $\overline{PB} \perp \overline{RB}$  and  $\overline{PA} \cong \overline{PB}$   
Prove that  $\triangle PAR \cong \triangle PBR$



2. Given:  $\overline{AB} \perp \overline{BC}$ ,  $\overline{DE} \perp \overline{EF}$ ,  $\overline{BC} \parallel \overline{EF}$ ,  $\overline{AF} \cong \overline{CD}$   
Prove:  $\triangle ABC \cong \triangle DEF$  (challenging, but you can do it!)





3. Given:  $\angle A \cong \angle P$ ,  $\angle B \cong \angle R$ ,  $W$  is the midpoint of  $\overline{AP}$

Prove:  $\triangle AWB \cong \triangle PWR$

Step 1: Color the correspondence of the triangles in the drawing.

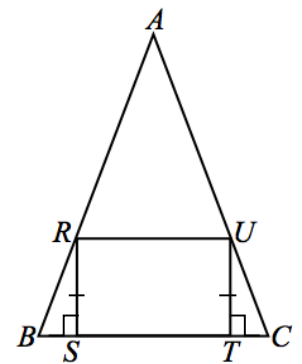
Step 2: Redraw  $\triangle AWB$  and  $\triangle PWR$  and recolor their correspondence below:

Do the proof:

4. Given the drawing with the information as marked,

A) Can you prove  $\triangle RBS \cong \triangle UCT$  by  $AAS \cong AAS$  if you were also given  $\overline{AB} \cong \overline{AC}$ ?

Explain your reasoning:



B) What information is needed to prove  $\triangle RBS \cong \triangle UCT$  by the  $R_{\Delta}HL$  criteria?