A Way to Prove Two Segments or Two Angles Congruent

1. Identify two triangles in which the two segments or angles are corresponding parts.
2. Prove that the triangles are congruent.
3. State that the two parts are congruent, using the reason

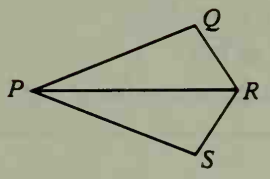
   Corr. parts of $\cong$ $\triangle$ are $\cong$.

Classroom Exercises

Describe your plan for proving the following.

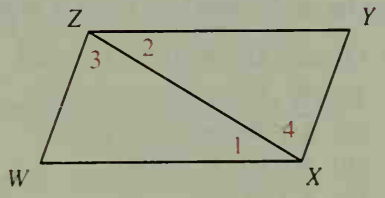
1. Given: $\overleftrightarrow{PR}$ bisects $\angle QPS$; $\overline{PQ} \cong \overline{PS}$
Prove: $\angle Q \cong \angle S$

2. Given: $\overleftrightarrow{PR}$ bisects $\angle QPS$ and $\angle QRS$
Prove: $\overline{RQ} \cong \overline{RS}$

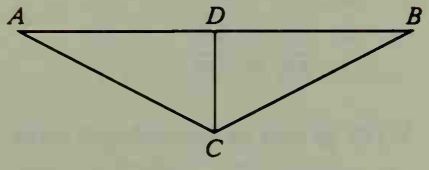


3. Given: $\overline{WX} \cong \overline{YZ}$; $\overline{ZW} \cong \overline{XY}$
Prove: $\overline{WX} \parallel \overline{ZY}$

4. Given: $\overline{ZW} \parallel \overline{YX}$; $\overline{ZW} \cong \overline{XY}$
Prove: $\overline{ZY} \parallel \overline{WX}$



5. Given: $\overline{CD} \perp \overline{AB}$;
D is the midpoint of $\overline{AB}$.
Prove: $\overline{CA} \cong \overline{CB}$



6. Given: M is the midpoint of $\overline{AB}$;
plane $X \perp \overline{AB}$ at M.
What can you deduce about $\overline{AP}$ and $\overline{BP}$? Describe a plan for proving that your conclusion is correct.