

# Reteaching 8-4

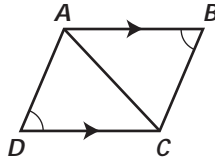
**OBJECTIVE:** Using triangle congruence and CPCTC     **MATERIALS:** None  
to prove the parts of two triangles are congruent.

## Example

Write a two-column proof.

Given:  $\overline{AB} \parallel \overline{DC}$ ,  $\angle B \cong \angle D$

Prove:  $\overline{BC} \cong \overline{DA}$



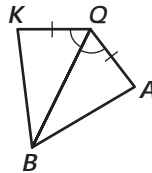
Statements	Reasons
1. $\overline{AB} \parallel \overline{DC}$	1. Given
2. $\angle BAC \cong \angle DCA$	2. If $\parallel$ lines, then alt. int. $\angle$ s are $\cong$ .
3. $\angle B \cong \angle D$	3. Given
4. $\overline{AC} \cong \overline{AC}$	4. Refl. Prop. of $\cong$
5. $\triangle ABC \cong \triangle CDA$	5. AAS Theorem
6. $\overline{BC} \cong \overline{DA}$	6. CPCTC

## Activity

Complete the two-column proof.

Given:  $\overline{QK} \cong \overline{QA}$ ;  $\overrightarrow{QB}$  bisects  $\angle KQA$

Prove:  $\overline{KB} \cong \overline{AB}$



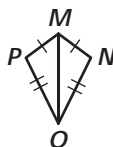
Statements	Reasons
1. _____	1. Given
2. $\angle KQB \cong \angle AQB$	2. _____
3. _____	3. Refl. Prop. of $\cong$
4. $\triangle KBQ \cong \triangle ABQ$	4. _____
5. $\overline{KB} \cong \overline{AB}$	5. _____

## Additional Exercises

Write a two-column proof.

6. Given:  $\overline{MN} \cong \overline{MP}$ ,  $\overline{NO} \cong \overline{PO}$

Prove:  $\angle N \cong \angle P$



7. Given:  $\overline{ON}$  bisects  $\angle JOH$ ,  $\angle J \cong \angle H$

Prove:  $\overline{JN} \cong \overline{HN}$

