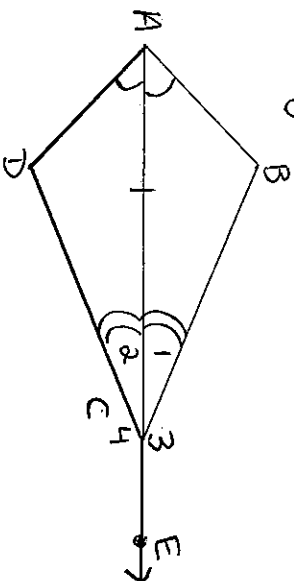


Name

*Key*

- 1) Given:  $\overline{AE}$  bisects  $\angle BAD$   
 $\angle 3 \cong \angle 4$

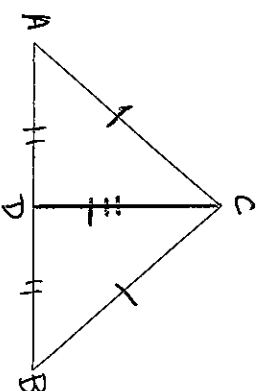
Prove:  $\triangle ABC \cong \triangle ADC$



Statements	Reasons
1. $\overrightarrow{AE}$ bisects $\angle BAD$	1. Given
2. $\angle BAE \cong \angle DAE$	2. Def. $\angle$ bisector
3. $\angle 3 \cong \angle 4$	3. Given
4. $m\angle 1 + m\angle 3 = 180$ ; $m\angle 2 + m\angle 4 = 180$	4. $\angle$ adjn. post.
5. $\angle 1 + \angle 3$ are supp.; $\angle 2 + \angle 4$ are supp.	5. def. supp.
6. $\angle 1 \cong \angle 2$	6. $\angle 1 \cong \angle 2$ to $\cong \angle 3 \cong \angle 4$
7. $\overline{AC} \cong \overline{AC}$	7. Reflexive
8. $\triangle ABC \cong \triangle ADC$	8. ASA

- 2) Given:  $\overline{CA} \cong \overline{CB}$ ; D is midpt. of  $\overline{AB}$

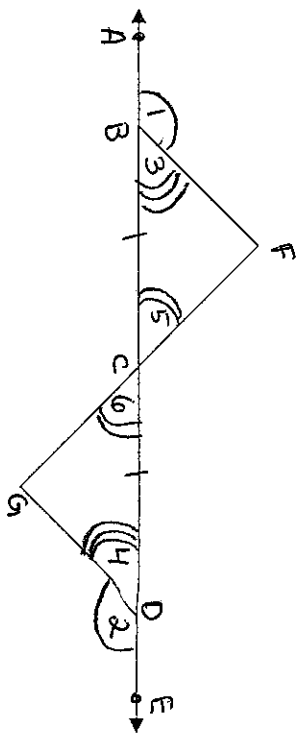
Prove:  $\triangle ACD \cong \triangle BCD$



Statements	Reasons
1. $\overline{CA} \cong \overline{CB}$ ; D is midpt. of $\overline{AB}$	1. Given
2. $\overline{AD} \cong \overline{DB}$	2. def. midpt
3. $\overline{CD} \cong \overline{CD}$	3. Reflexive
4. $\triangle ACD \cong \triangle BCD$	4. SSS

3) Given:  $\angle 1 \cong \angle 2$ ; C is midpt. of  $\overline{BD}$

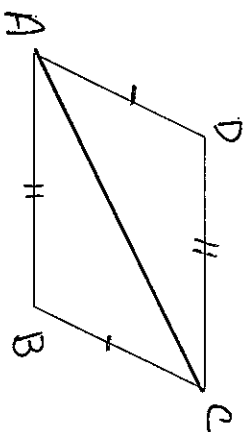
Prove:  $\triangle BFC \cong \triangle DGC$



Statements	Reasons
1. $\angle 1 \cong \angle 2$ ; C is midpt. of $\overline{BD}$	1. Given
2. $\overline{BC} \cong \overline{CD}$	2. Def. midpt.
3. $\angle 5 \cong \angle 6$	3. Vert. $\angle$ 's $\cong$
4. $m\angle 1 + m\angle 3 = 180$ ; $m\angle 4 + m\angle 2 = 180$	4. $\angle$ addn, post.
5. $\angle 1 + \angle 3$ are supp.; $\angle 4 + \angle 2$ are supp.	5. def. supp.
6. $\angle 3 \cong \angle 4$	6. $\angle$ 's supp. to $\cong \angle$ 's $\cong$
7. $\triangle BFC \cong \triangle DGC$	7. ASA

4) Given: Both pairs of opposite sides of quadrilateral ABCD are congruent.

Prove:  $\triangle ABC \cong \triangle CDA$



Statements	Reasons
1. $\overline{AD} \cong \overline{BC}$ ; $\overline{DC} \cong \overline{AB}$	1. Given
2. $\overline{AC} \cong \overline{AC}$	2. Reflexive
3. $\triangle ABC \cong \triangle CDA$	3. SSS