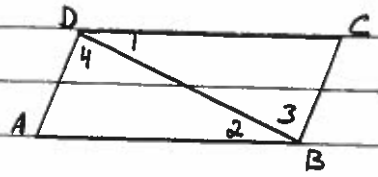
A#32 p. 133 Self-Test I #6-8

Key

6. Given: $\angle 1 \cong \angle 2$; $\angle 3 \cong \angle 4$

Prove: $\triangle ADB \cong \triangle CBD$

For #6-8



Statements	Reasons
① $\angle 1 \cong \angle 2$; $\angle 3 \cong \angle 4$	① Given
② $\overline{BD} \cong \overline{BD}$	② Refl. Prop. of $\cong$
③ $\triangle ADB \cong \triangle CBD$	③ ASA $\cong$ Post

7. Given: $\overline{CD} \cong \overline{AB}$; $\overline{CB} \cong \overline{AD}$

Prove: $\angle 1 \cong \angle 2$

statements	Reasons
① $\overline{CD} \cong \overline{AB}$; $\overline{CB} \cong \overline{AD}$	① Given
② $\overline{BD} \cong \overline{BD}$	② Refl. Prop. of $\cong$
③ $\triangle ABD \cong \triangle CDB$	③ SSS $\cong$ Post
④ $\angle 1 \cong \angle 2$	④ CPCTC

8. Given: $\overline{AD} \parallel \overline{BC}$; $\overline{AD} \cong \overline{CB}$

Prove: $\overline{DC} \parallel \overline{AB}$

statements	Reasons
① $\overline{AD} \parallel \overline{BC}$; $\overline{AD} \cong \overline{CB}$	① Given
② $\angle 3 \cong \angle 4$	② Alt. Int. $\angle$s Thm
③ $\overline{BD} \cong \overline{BD}$	③ Refl. Prop. of $\cong$
④ $\triangle ABD \cong \triangle CDB$	④ SAS $\cong$ Post
⑤ $\angle 1 \cong \angle 2$	⑤ CPCTC
⑥ $\overline{DC} \parallel \overline{AB}$	⑥ Alt. Int. $\angle$s Converse