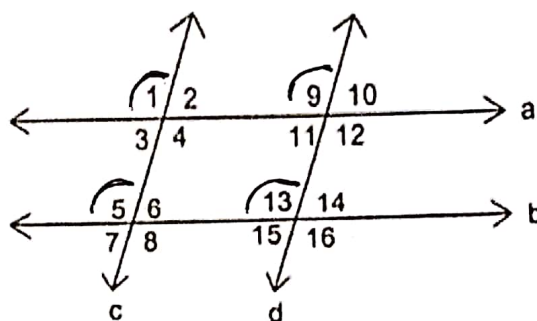


Class work Proof Examples

Example 1:

Given: $a \parallel b$ and $c \parallel d$

Prove: $\angle 1 \cong \angle 13$

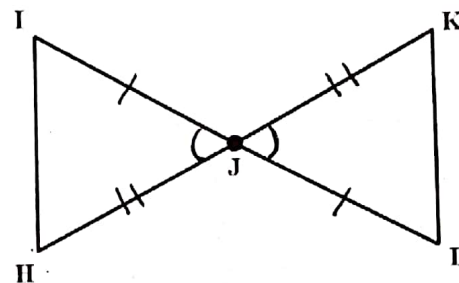


Statements	Reasons
1. $a \parallel b$ and $c \parallel d$	1. Given
2. $\angle 1 \cong \angle 5$	2. Corresponding Angle Postulate $\angle 3$
3. $\angle 5 \cong \angle 13$	3. Corresponding \angle Postulate
4. $\angle 1 \cong \angle 13$	4. Transitive Transitive Property

Example 2: Given: J is the midpoint of IL.

J is the midpoint of HK.

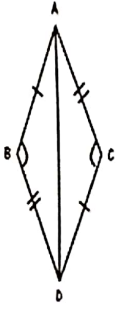
Prove: $\triangle IJH \cong \triangle LJK$



Statement:	Reason:
J is the midpoint of IL J is the midpoint of HK	Given
$IJ \cong JL$	Def. of Midpoint
$HJ \cong JK$	Def. of Midpoint
$\angle IJH \cong \angle KJL$	Def. of Vertical \angle s
$\triangle IJH \cong \triangle LJK$	SAS \blacksquare

[13] Given: See diagram

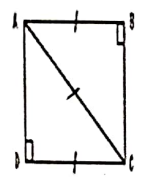
Prove: $\triangle ACD \cong \triangle DBA$



STATEMENTS	REASONS
1. $\overline{AB} \cong \overline{AD}$ $\overline{BC} \cong \overline{DC}$	1. Given
2. $\angle ACD \cong \angle DBA$	2.
3. $\triangle ACD \cong \triangle DBA$	3. SAS

[14] Given: See diagram

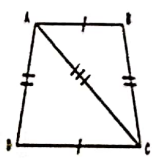
Prove: $\triangle ABC \cong \triangle CDA$



STATEMENTS	REASONS
1. $\overline{AB} \cong \overline{DC}$ $\angle B \cong \angle D$	1. Given
2. $\overline{AC} \cong \overline{AC}$	2. Reflexive Property
3. $\triangle ABC \cong \triangle CDA$	3. HL

[15] Given: See diagram

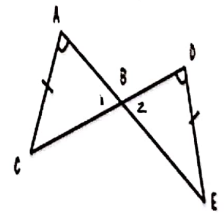
Prove: $\triangle ABC \cong \triangle CDA$



STATEMENTS	REASONS
1. $\overline{AB} \cong \overline{DC}$ $\overline{AD} \cong \overline{BC}$	1. Given
2. $\overline{AC} \cong \overline{AC}$	2. Reflexive Property
3. $\triangle ABC \cong \triangle CDA$	3. SSS

[15] Given: See diagram

Prove: $\triangle ABC \cong \triangle DBE$



STATEMENTS	REASONS
1. $\overline{AC} \cong \overline{DE}$ $\angle A \cong \angle D$	1. Given
2. $\angle ABC \cong \angle DBE$	2. Def. of Vertical \angle s
3. $\triangle ABC \cong \triangle DBE$	3. AAS

