

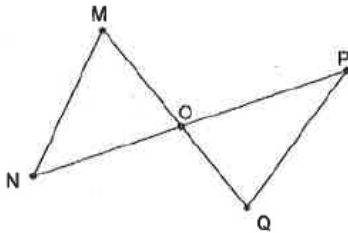
### Reason Bank

Alternate Interior Angles Theorem  
Alternate Exterior Angles Theorem  
Base Angles Theorem  
Base Angles Converse Theorem  
Consecutive Interior Angles Theorem  
Corresponding Angles Postulate  
Definition of Angle Bisector  
Definition of Midpoint

Given  
Reflexive Property  
Side Angle Side (SAS)  
Side Side Side (SSS)  
Vertical Angles Theorem

1. **Given:** O is midpoint of  $\overline{MQ}$  and  $\overline{NP}$ .

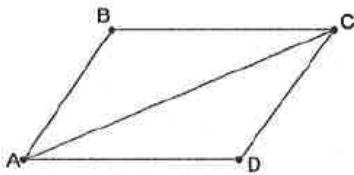
**Prove:**  $\triangle MON \cong \triangle QOP$



Statements	Reasons
1.	1. Given
2.	2. Definition of Midpoint
3. $\overline{NO} \cong \overline{PO}$	3.
4.	4. Vertical Angles Theorem
5.	5.

2. **Given:**  $\overline{AB} \cong \overline{CD}$ ;  $\overline{BC} \cong \overline{DA}$

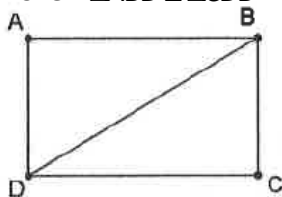
**Prove:**  $\triangle ABC \cong \triangle CDA$



Statements	Reasons
1. $\overline{AB} \cong \overline{CD}$	1.
2.	2. Given
3.	3.
4. $\triangle ABC \cong \triangle CDA$	4.

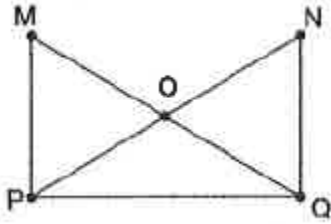
3. **Given:**  $\overline{AD} \cong \overline{CB}$ ;  $\overline{AD} \parallel \overline{CB}$

**Prove:**  $\triangle ABD \cong \triangle CDB$



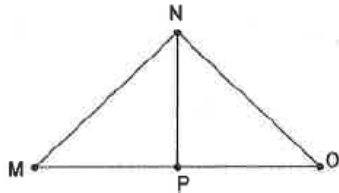
Statements	Reasons
1.	1. Given
2.	2. Given
3. $\angle ADB \cong \angle CBD$	3.
4.	4. Reflexive Property
5.	5.

4. **Given:**  $\overline{MQ} \cong \overline{NP}$ ;  $\overline{MP} \cong \overline{NQ}$   
**Prove:**  $\triangle MPQ \cong \triangle NQP$



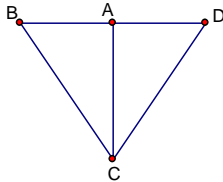
Statements	Reasons
1. $\overline{MQ} \cong \overline{NP}$	1.
2.	2. Given
3.	3.
4. $\triangle MPQ \cong \triangle NQP$	4.

5. **Given:**  $\overline{NP}$  bisects  $\angle MNO$ ,  $\overline{MN} \cong \overline{ON}$   
**Prove:**  $\triangle MNP \cong \triangle ONP$



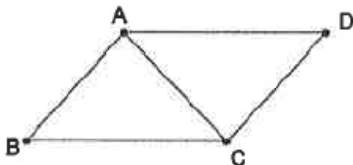
Statements	Reasons
1. $\overline{NP}$ bisects $\angle MNO$	1.
2.	2. Definition of angle bisector
3. $\overline{MN} \cong \overline{ON}$	3.
4.	4.
5. $\triangle MNP \cong \triangle ONP$	5.

6. **Given:**  $\overline{AB} \cong \overline{AD}$ ;  $\overline{BC} \cong \overline{CD}$   
**Prove:**  $\triangle ABC \cong \triangle ADC$



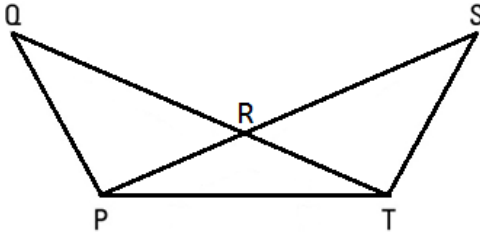
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

7. **Given:**  $\overline{AD} \cong \overline{CB}$ ,  $\overline{AD} \parallel \overline{CB}$   
**Prove:**  $\triangle ABC \cong \triangle CDA$



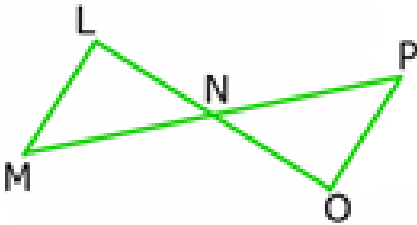
Statements	Reasons
1. $\overline{AD} \cong \overline{CB}$	1.
2. $\overline{AD} \parallel \overline{CB}$	2.
3.	3. Alternate interior angles thm
4.	4.
5. $\triangle ABC \cong \triangle CDA$	5.

8. **Given:**  $\angle RPT \cong \angle RTP$   
 $\angle PQR \cong \angle TSR$   
**Prove:**  $\triangle QPR \cong \triangle STR$



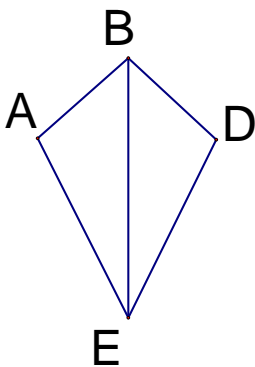
Statements	Reasons
1. $\angle RPT \cong \angle RTP$	1.
2.	2.
3. $\angle PQR \cong \angle TSR$	3.
4.	4.
5. $\triangle QPR \cong \triangle STR$	5.

9. **Given:** N is the midpoint of  $\overline{LO}$   
 $\overline{LM} \parallel \overline{OP}$   
**Prove:**  $\triangle LNM \cong \triangle ONP$



Statements	Reasons
1. N is the midpoint of $\overline{LO}$	1.
2.	2. Definition of midpoint
3. $\overline{LM} \parallel \overline{OP}$	3.
4. $\angle LMN \cong \angle OPN$	4.
5.	5. Vertical Angles Theorem
6.	6.

10. **Given:**  $\overline{BE}$  bisects  $\angle ABD$   
 $\overline{BE}$  bisects  $\angle AED$   
**Prove:**  $\triangle ABE \cong \triangle DBE$



Statements	Reasons
1. $\overline{BE}$ bisects $\angle ABD$	1.
2.	2. Definition of angle bisector
3. $\overline{BE}$ bisects $\angle AED$	3.
4.	4. Definition of angle bisector
5.	5.
6. $\triangle ABE \cong \triangle DBE$	6.