

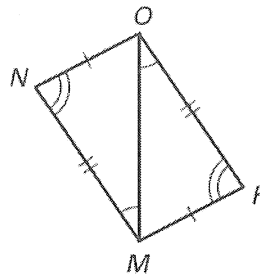
Honor's Keystone Geometry
4.2 Congruent Figures Proof Practice

Name Key
Date _____

Proof Complete the proof.

GIVEN: $\angle MNO \cong \angle OPM$, $\angle NMO \cong \angle POM$,
 $\overline{NO} \cong \overline{MP}$, $\overline{NM} \cong \overline{OP}$

PROVE: $\triangle NMO \cong \triangle POM$

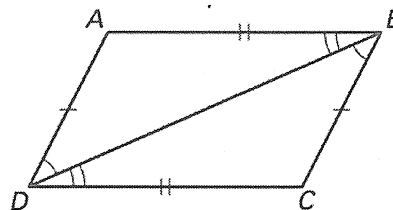


Statements	Reasons
1. $\angle MNO \cong \angle OPM$, $\angle NMO \cong \angle POM$, $\overline{NO} \cong \overline{MP}$, $\overline{NM} \cong \overline{OP}$	1. Given
2. $\overline{MO} \cong \overline{MO}$	2. ? Reflexive Prop.
3. $\angle NOM \cong \angle PMO$	3. ? 3rd Angles Theorem
4. $\triangle NMO \cong \triangle POM$	4. ? Definition of $\cong \Delta$'s

Proof Complete the proof.

GIVEN: $\angle ABD \cong \angle CDB$, $\angle ADB \cong \angle CBD$,
 $\overline{AD} \cong \overline{BC}$, $\overline{AB} \cong \overline{DC}$

PROVE: $\triangle ABD \cong \triangle CDB$

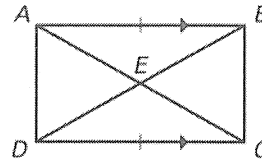


Statements	Reasons
1. $\angle ABD \cong \angle CDB$, $\angle ADB \cong \angle CBD$, $\overline{AD} \cong \overline{BC}$, $\overline{AB} \cong \overline{DC}$	1. Given
2. $\overline{BD} \cong \overline{BD}$	2. ? Reflexive Prop.
3. ? $\angle A \cong \angle C$	3. Third Angles Theorem
4. $\triangle ABD \cong \triangle CDB$	4. ? Definition of $\cong \Delta$'s

Proof Complete the proof.

GIVEN: $\overline{AB} \parallel \overline{DC}$, $\overline{AB} \cong \overline{DC}$,
 E is the midpoint of \overline{AC} and \overline{BD} .

PROVE: $\triangle AEB \cong \triangle CED$



Statements	Reasons
1. $\overline{AB} \parallel \overline{DC}$, $\overline{AB} \cong \overline{DC}$, E is the midpoint of \overline{AC} and \overline{BD} .	1. Given
2. $\overline{AE} \cong \overline{EC}$, $\overline{BE} \cong \overline{ED}$	2. ? Definition of mdpt
3. $\angle EAB \cong \angle ECD$ $\angle EBA \cong \angle EDC$	3. ? Alt. Int \angle 's Theorem
4. $\angle AEB \cong \angle DEC$	4. ? Vert. \angle 's \cong Theorem
5. $\triangle AEB \cong \triangle CED$	5. ? Definition of $\cong \triangle$'s