



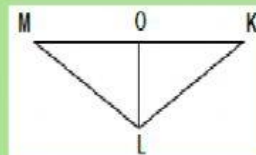
Activity 3.6 – Proving Statements on Triangle Congruence

Name: _____ Section: _____

DIRECTIONS: Complete the proof by choosing your answer from the choices. Write the CAPITAL LETTER of your answer on the box provided.

Activity 1: Complete Me!

1. Given: $\overline{LO}$ bisects $\overline{KM}$, $\angle KOL \cong \angle MOL$
 Prove: $\angle KLO \cong \angle MLO$



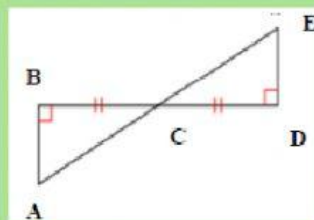
Proof:

Statements	Reasons
1.	1. Given
2. $\overline{KO} \cong \overline{MO}$	2. Definition of Segment Bisector
3.	3. Reflexive Property
4. $\angle KOL \cong \angle MOL$	4.
5. $\triangle KOL \cong \triangle MOL$	5.
6. $\angle KLO \cong \angle MLO$	6.

- | | | | |
|--|--|----------|----------------------------------|
| A. $\overline{LO} \cong \overline{LO}$ | C. Given | E. ASA | G. $\angle KOL \cong \angle MOL$ |
| B. $\overline{KO} \cong \overline{MO}$ | D. $\overline{LO}$ bisects $\overline{KM}$ | F. CPCTC | H. SAS |

Activity 2: Keep Trying!

- Given: $\overline{BC} \cong \overline{CD}$, C is the midpoint of $\overline{AE}$
 Prove: $\triangle ABC \cong \triangle EDC$



Proof:

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

- | | | |
|----------------------------------|--|---|
| A. Given | D. SAS | G. Vertical angle theorem |
| B. $\angle BCA \cong \angle DCE$ | E. $\overline{BC} \cong \overline{CD}$ | H. $\triangle ABC \cong \triangle EDC$ |
| C. Definition of midpoint | F. $\overline{AC} \cong \overline{EC}$ | I. C is the midpoint of $\overline{AE}$ |