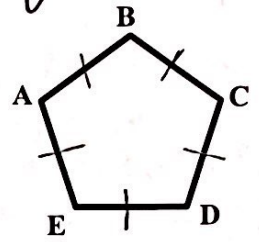


Geometry Honors

Proof Worksheet WS#2

Name Answer Key Period



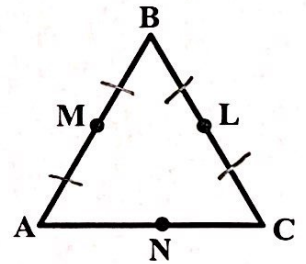
Given: $AB = BC, CD = DE, \overline{BC} \cong \overline{CD}, \overline{EA} \cong \overline{DE}$

Prove: $AB = EA$

Statements	Reasons
① $AB = BC$ $CD = DE$ $\overline{BC} \cong \overline{CD}$ $\overline{EA} \cong \overline{DE}$ diagram	① Given
② $BC = CD$ $EA = DE$	② If segs are \cong , then their measures are equal.
③ $AB = CD$	③ Transitive POE
④ $AB = DE$	④ Transitive POE
⑤ $AB = EA$	⑤ Substitution POE

Given: M and L are midpoints of \overline{AB} and \overline{BC} , resp., & $\overline{BM} \cong \overline{BL}$

Prove: $AM = LC$



Statements	Reasons
① M and L are midpoints of \overline{AB} and \overline{BC} $\overline{BM} \cong \overline{BL}$ Diagram	① Given
② $\overline{AM} \cong \overline{BM}$ $\overline{BL} \cong \overline{LC}$	② If a point is the midpoint, then it divides the seg. into 2 \cong segs.
③ $\overline{AM} \cong \overline{BL}$	③ Transitive POC
④ $\overline{AM} \cong \overline{LC}$	④ Transitive POC
⑤ $AM = LC$	⑤ If segs are \cong , then their measures are equal.