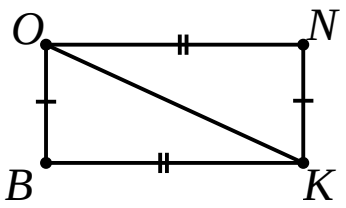
Geometry R – Mr. Bo
Unit 5 - Day 4 HW

Name:_____
Date:_____

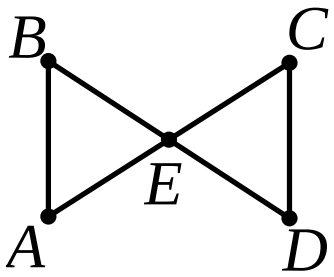
1a. Given: $\overline{BO} \cong \overline{NK}$
$\overline{BK} \cong \overline{NO}$
Prove: $\angle BOK \cong \angle NKO$



b. Is it now possible to conclude $\overline{BO} \,//\, \overline{NK}$?
Justify your reasoning.

2a. Given: $\overline{AB} \,//\, \overline{CD}$
$\overline{BD}$ bisects $\overline{AC}$ at E.

Prove: $\overline{BE} \cong \overline{DE}$

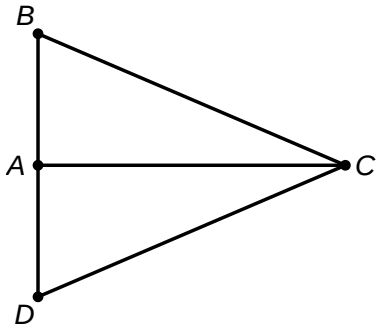


b. Is it now possible to conclude $\overline{AC}$ bisects $\overline{BD}$ *at* E ?
Justify your reasoning.

3a. Given: $\overline{BC} \cong \overline{DC}$

$\overline{AC}$ *bisects* $\angle BCD$

Prove: $\angle BAC \cong \angle DAC$



b. Is it now possible to conclude $\overline{AC} \perp \overline{BD}$?

Justify your reasoning.

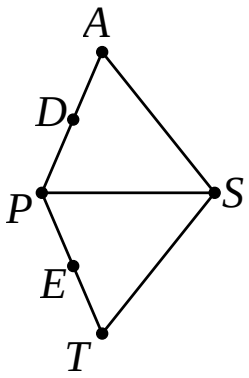
4a. Given: $\overline{PDA}$ & $\overline{PET}$

$\overline{AS} \cong \overline{TS}$

$\overline{PD} \cong \overline{PE}$

$\overline{DA} \cong \overline{ET}$

Prove: $\angle ASP \cong \angle TSP$



b. Is it now possible to conclude $\overline{PS}$ bisects $\angle AST$?

Justify your reasoning.