① given - In fig $OD \perp OE$

to prove - Points A, O, B are collinear
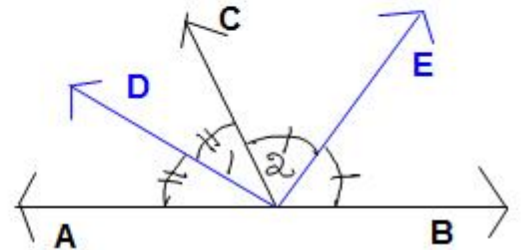
proof $OD \perp OE$

$\Rightarrow \angle DOE = 90°$

$\Rightarrow \angle 1 + \angle 2 = 90°$

(×2) $2\angle 1 + 2\angle 2 = 180°$

$\Rightarrow \angle AOC + \angle BOC = 180°$ $\left(\begin{array}{l} OD \text{ bis } \angle AOC \\ OE \text{ bis } \angle BOC \end{array} \right)$

$\Rightarrow$ AOB is a st. line (linear pair axiom)

∴ Points A, O, B are collinear

②
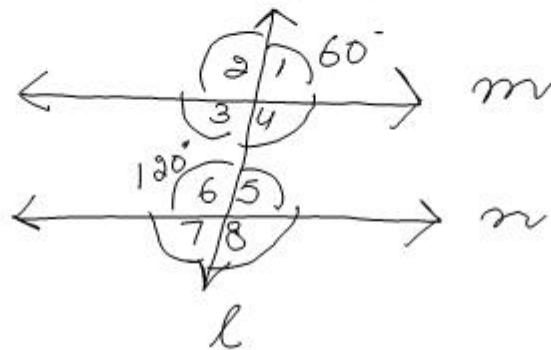
to show $m \parallel n$

proof $\angle 1 + \angle 4 = 180°$

$60° + \angle 2 = 180°$

$\Rightarrow \angle 2 = 180° - 60°$

$= 120°$

$\angle 6 = 120°$

∴ $\angle 4 = \angle 6$

But these are al. cn. ∠s

$m \parallel n$