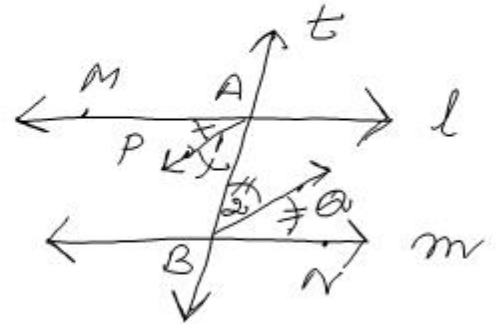


NCERT Exempar Solutions by Dev Anoop (Bathinda)

③ given -  $l \parallel m$ ,  $AP$ ,  $BQ$  are bisectors of  $\angle MAB$  and  $\angle NBA$  resp  
to prove  $AP \parallel BQ$



proof  $l \parallel m$   
 $\angle MAB = \angle NBA$  (alternate  $\angle$ s)  
 $\angle 1 = \angle 2$  ( $AP$  bis.  $\angle MAB$ ,  $BQ$  bis  $\angle NBA$ )  
 $\Rightarrow \angle 1 = \angle 2$   
 but these are alternate interior angles  
 $\therefore AP \parallel BQ$

④ converse of Q3  
 given - In fig  $AP \parallel BQ$ ,  $AP$  bisects  $\angle MAB$ ,  $BQ$  bisects  $\angle NBA$

to prove -  $l \parallel m$   
 proof  $AP \parallel BQ$   
 $\therefore \angle 1 = \angle 2$  (alternate  $\angle$ s)  
 $(\times 2) \quad 2\angle 1 = 2\angle 2$   
 $\Rightarrow \angle MAB = \angle NBA$  ( $AP$  bis  $\angle MAB$ )  
 ( $BQ$  bis  $\angle NBA$ )  
 but these are alt.  $\angle$ s  
 $\therefore l \parallel m$