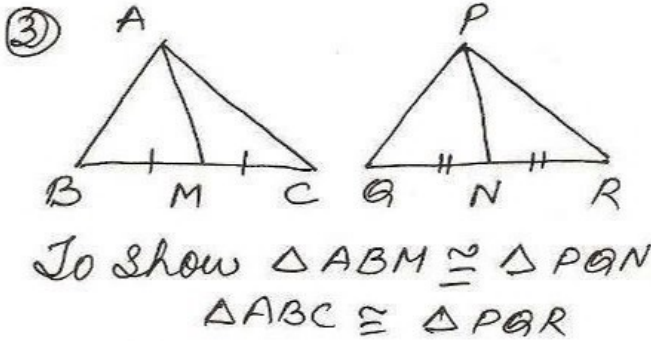


ex 7.3

NCERT Page 8



Proof  $BC = QR$   
 $\frac{1}{2} BC = \frac{1}{2} QR$   
 $\Rightarrow BM = QN$  [As medians to sides BC, QR resp.]

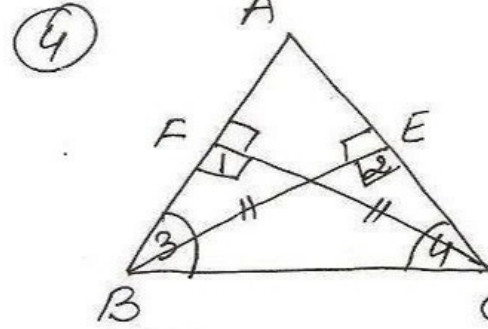
In  $\triangle ABM$  and  $\triangle PQN$   
 $AB = PQ$  (given)  
 $AM = PN$  (given)  
 $BM = QN$  (proved)

$\therefore \triangle ABM \cong \triangle PQN$  by SSS prop

$\angle B = \angle Q$  (cpct)

In  $\triangle ABC$  and  $\triangle PQR$   
 $AB = PQ$  (given)  
 $\angle B = \angle Q$  (proved)  
 $BC = QR$  (given)

$\therefore \triangle ABC \cong \triangle PQR$  by SAS prop

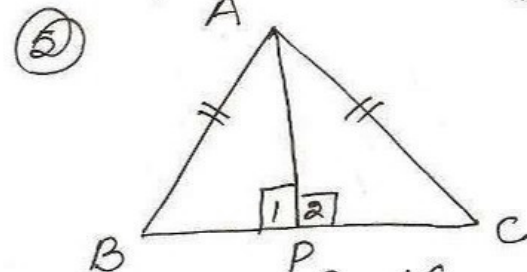


To prove  $AB = AC$

Proof In  $\triangle BFC$  and  $\triangle CEB$   
 $\angle 1 = \angle 2 = 90^\circ$   
 $BC = CB$  (common)  
 $CF = BE$  (given)  
 $\therefore \triangle BFC \cong \triangle CEB$  by RHS prop

$\angle 3 = \angle 4$  (cpct)

$\Rightarrow AC = AB$  (converse of isos  $\triangle$  prop)



To show  $\angle B = \angle C$

Proof In  $\triangle APB$  and  $\triangle APC$   
 $\angle 1 = \angle 2 = 90^\circ$   
 $AB = AC$   
 $AP = AP$

$\therefore \triangle APB \cong \triangle APC$  by RHS prop

$\angle B = \angle C$  (cpct)