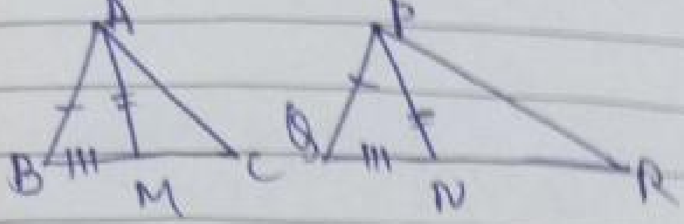
Hence, AD bisects A.

(3)



AB = PQ

BC = QR and AM = PN

(i) BC = BM and QR = QN

Also, $BC = QR$

So, $BC = QR$

$BM = QN$

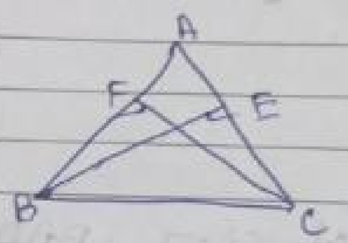
In ΔABM and ΔPQN.

$AM = PN$ and $AB = PQ$

$BM = QN$

$\therefore \Delta ABM \; \Delta PQN$ by SSS congruency.

(4)



Now, ΔBEC and ΔCFB,

$BEC = CFB = 90^\circ$

$BC = CB$

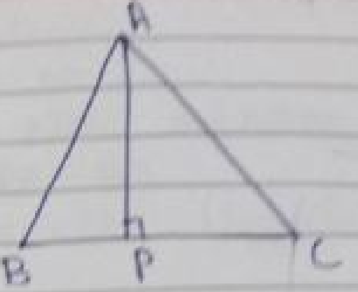
$BE = CF$

So, $\Delta BEC \; \Delta CFB$ by RHS congruence criterion.

Also, $C = B$

Therefore, $AB = AC$ as side opposite to the equal angles is always equal.

(5)



APB = APC = 90°

AB = AC

AP = AP

So, ΔABP ≅ ΔACP

∴ B = C