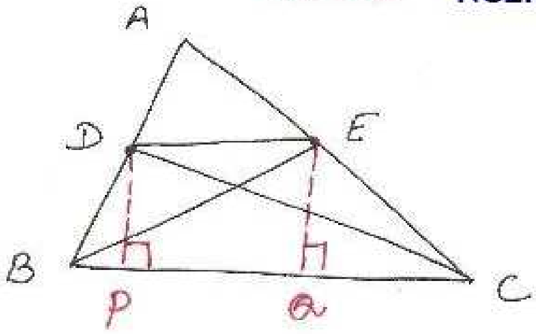
ex 9.3 **NCERT Exemplar Solutions by Dev Anoop (Bathinda)**

(7)




To prove – DE ∥ BC

Const – draw DP ⊥ BC, EQ ⊥ BC

Proof –

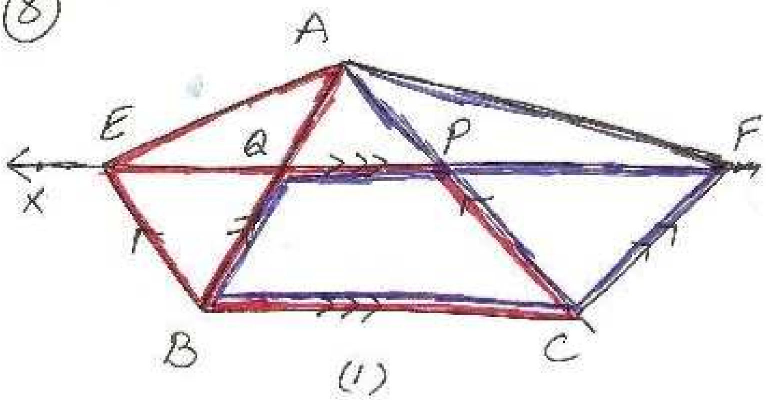
ar (△DBC) = ar (△EBC)

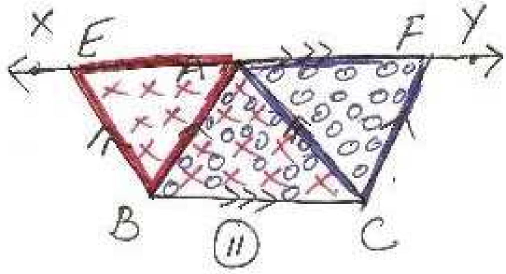
$\cancel{\frac{1}{2}} \times \cancel{BC} \times DP = \cancel{\frac{1}{2}} \times \cancel{BC} \times EQ$

⇒ DP = EQ

∴ DE ∥ BC [∵ distance remains constant]

(8)




To prove ar (△ABE) = ar (△ACF)

Proof – fig (I) ar (△ABE) = ½ ar (∥gm EBCP) ... (I) [△ and ∥gm on same base and between same ∥ lines]

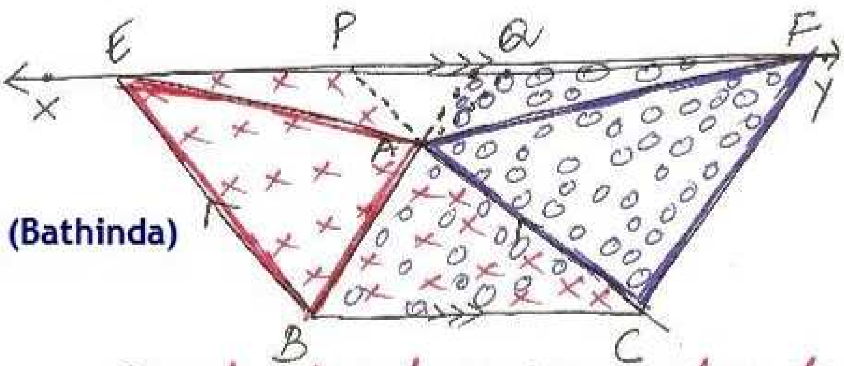
ar (△ACF) = ½ ar (∥gm QBCF) ... (II)

ar (∥gm EBCP) = ar (∥gm QBCF) ... (III) [∥gms on same base and between same ∥ lines]

From (I), (II), (III)

ar (△ABE) = ar (△ACF)

Sim. for fig (II), (III)




Const – produce BA and CA to intersect XY at Q and P resp.

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