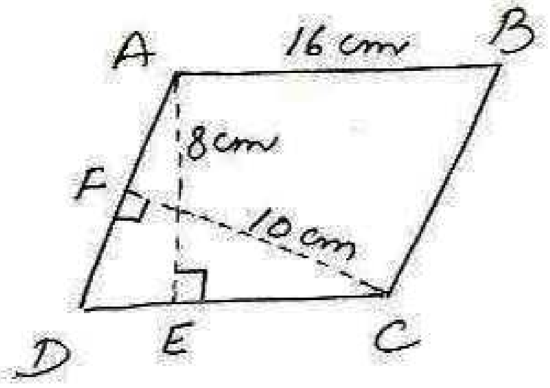
 ex 9.2



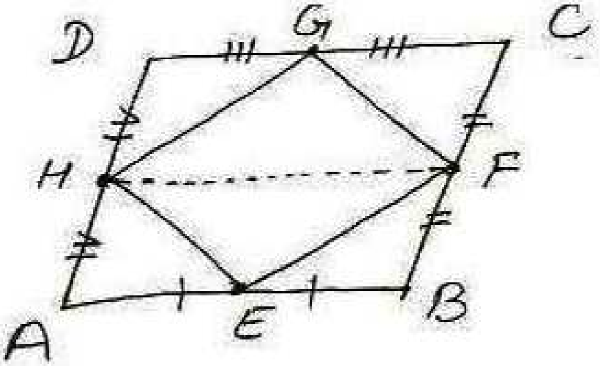
ar(||gm ABCD) = ar(||gm ABCD)

DC × AE = AD × CF

16 × 8 = AD × 10 [DC = AB = 16cm opp sides of ||gm]

⇒ $AD = \frac{16 \times 8}{10}$

= 12.8 cm



To Prove ar(EFGH) = $\frac{1}{2}$ar(ABCD)

Const - join HF

Proof AD || BC [opp sides of ||gm]

⇒ AH || BF

AD = BC [do]

2 AH = 2 BF [H is midpt AD, F is midpt of BC]

⇒ AH = BF

ABFH is a ||gm [AH || BF, AH = BF]

Similarly HFCD is a

ar(△EHF) = $\frac{1}{2}$ ar(||gm

[△ and ||gm on sa base and betwee same || lines]

ar(△GHF) = $\frac{1}{2}$ ar(||gm

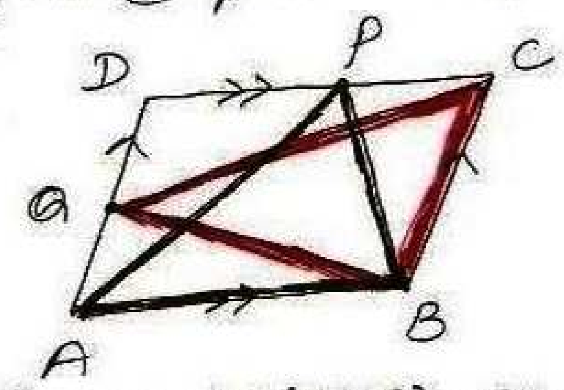
① + ⑪

ar(△EHF) + ar(△GHF

= $\frac{1}{2}$ [ar ||gm ABFH + ar ||gm

= $\frac{1}{2}$ ar(||gm ABCD)

③



To Prove ar(APB) = ar(

Proof

ar(△APB) = $\frac{1}{2}$ ar(||gm

[△ and ||gm on same base between same ||

ar(△BQC) = $\frac{1}{2}$ ar(||gm AB

From ① and ⑪

ar(△APB) = ar(△