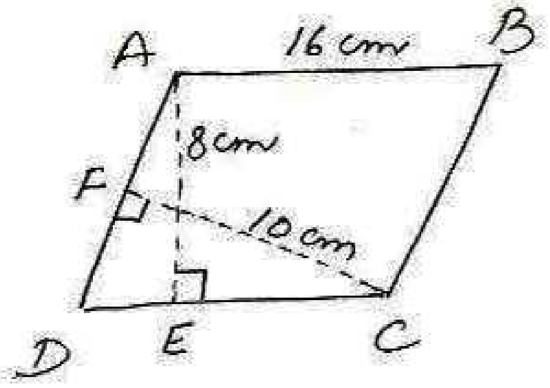
)



r($\parallel$gm ABCD) = ar($\parallel$gm ABCD)

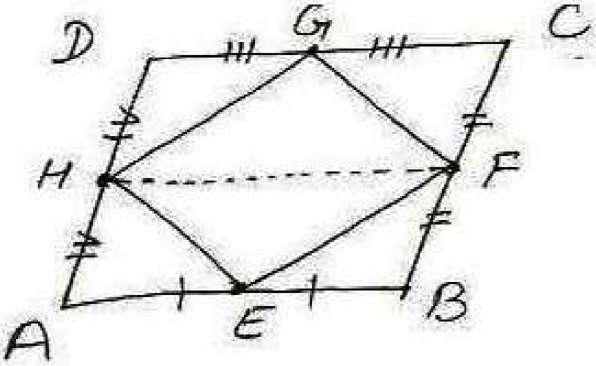
DC × AE = AD × CF

16 × 8 = AD × 10 [DC = AB = 16cm opp sides of $\parallel$gm]

$\Rightarrow$ AD = $\frac{16 \times 8}{10}$

= 12.8 cm

)



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

onst - join HF

roof AD $\parallel$ BC [opp sides of $\parallel$gm]

$\Rightarrow$ AH $\parallel$ BF

AD = BC [do]

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

$\Rightarrow$ AH = BF

ABFH is a $\parallel$gm [AH $\parallel$ BF, AH = BF]

Similarly HFCD is a

ar($\triangle$EHF) = $\frac{1}{2}$ ar($\parallel$gm

[$\triangle$ and $\parallel$gm on sa base and betwee same $\parallel$ lines]

ar($\triangle$GHF) = $\frac{1}{2}$ ar($\parallel$gm

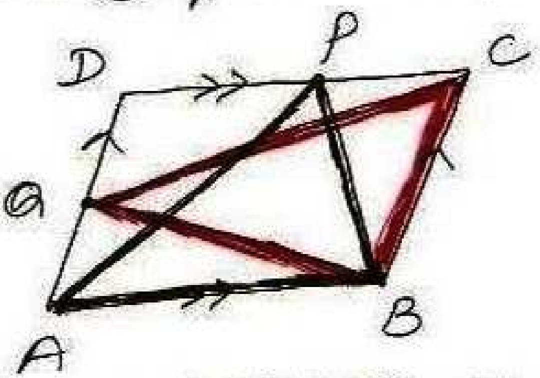
(i) + (ii)

ar($\triangle$EHF) + ar($\triangle$GH

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

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

(3)



To Prove ar(APB) = ar(

Proof

ar($\triangle$APB) = $\frac{1}{2}$ ar($\parallel$gm

[$\triangle$ and $\parallel$gm on same base between same $\parallel$

ar($\triangle$BQC) = $\frac{1}{2}$ ar($\parallel$gm AB

From (i) and (ii)

ar($\triangle$APB) = ar($\triangle$