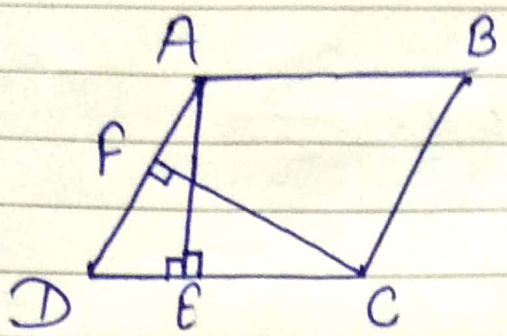
15/09/XX Class-IX (MATHS) K. Kanhaiya

(1)



ABCD is a parallelogram, AE ⊥ DC, CF ⊥ AD. If AB = 16cm, AE = 8cm and CF = 10cm, find AD.

Ans→ ar(ABCD) = ar(ABCD)

$AD \times CF = DC \times AE$

$AD \times 10 = 16 \times 8$ {∵ DC = AB}

$AD = \frac{128}{10}$ cm

$AD = 12.8$ cm.

(2) If E, F, G and H are respectively the mid-points of sides of a parallelogram ABCD. Sho.

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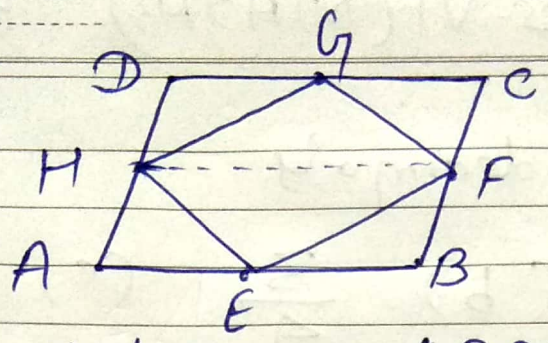

Show that $ar(EFGH) = \frac{1}{2} ar(ABCD)$.

Ans $ar(EFH) = \frac{1}{2} ar(ABFH)$ ---- (1)

$ar(GHF) = \frac{1}{2} ar(DCFH)$ ---(11)

adding (1) and (11)

$ar(EFH) + ar(GHF) = \frac{1}{2}\{ar(ABFH) + ar(DCFH)\}$

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

Do yourself :

(1) P and Q are any two points lying on the sides DC and AD respectively of a parallelogram ABCD. Show that $ar(APB) = ar(BQC)$.