

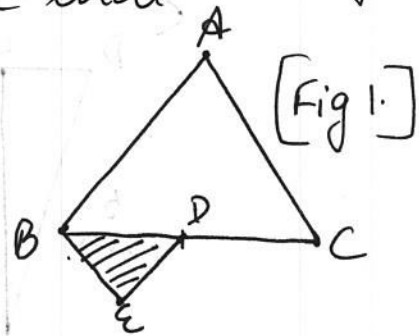
ASSIGNMENT

Ques 1. Diagonals AC and BD of a quadrilateral ABCD intersect each other at P. Show that $ar(\Delta APB) \times ar(\Delta CPD) = ar(\Delta APD) \times ar(\Delta BPC)$.

Ques 2. ABCD is a parallelogram. E is a point on BA such that $BE = 2EA$ and F is a point on DC such that $DF = 2FC$. Prove that AECF is a parallelogram whose area is one-third of the area of parallelogram ABCD.

Ques 3. The diagonals of a parallelogram ABCD intersect at a point O. Through O, a line l is drawn to intersect AD at P and BC at Q. Show that PQ divides the parallelogram into 2 parts of equal areas.

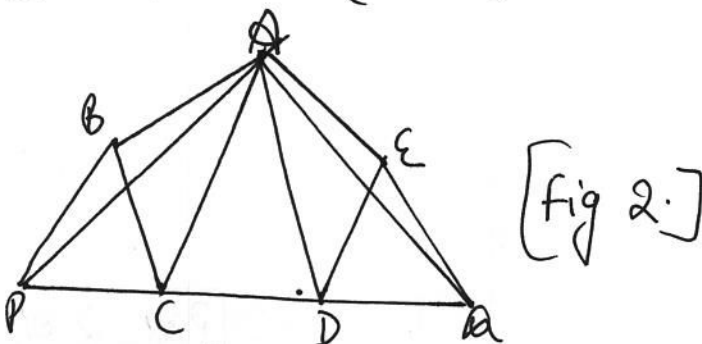
Ques 4. In fig 1. ABC and BDE are 2 equilateral triangles such that D is the mid pt. of BC. Prove that $ar(\Delta BDE) = \frac{1}{4} ar(\Delta ABC)$.



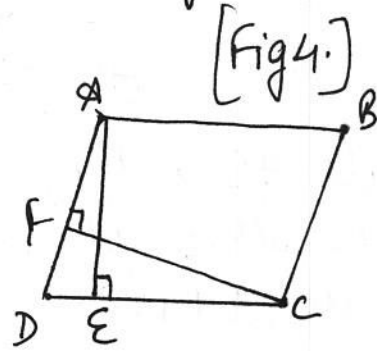
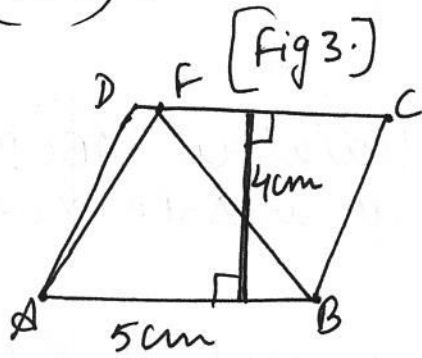
Ques 5. D and E are the mid points of BC and AD respectively of ΔABC . If area of $\Delta ABC = 20 \text{ cm}^2$, find $ar(\Delta EBD)$.

Ques 6. D is the mid pt. of side BC of ΔABC and E is the mid pt. of BD. If O is the mid pt. of AE, then prove that $ar(\Delta BOE) = \frac{1}{8} ar(\Delta ABC)$.

Ques 7. In fig 2. ABCDE is any pentagon. BP drawn parallel to AC meets DC produced at P and EA drawn parallel to AD meets CD produced at Q. Prove that $ar(ABCDE) = ar(\Delta APQ)$.

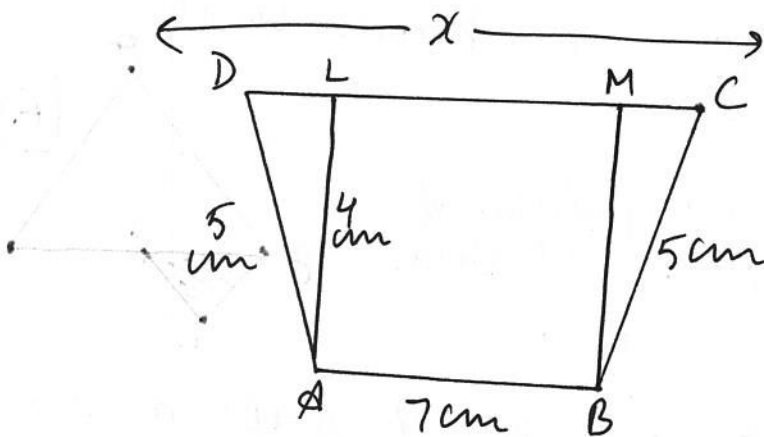


Ques 8. In fig 3. ABCD is a parallelogram. Find area ($\triangle AFB$).



Ques 9. In fig 4. ABCD is a $\parallel gm$. $AE \perp DC$ and $CF \perp AD$. If $AB = 8 cm$, $AE = 4 cm$ and $CF = 5 cm$, then find AD.

Ques 10. In Fig 5. ABCD is a trapezium in which $AB = 7 cm$, $AD = BC = 5 cm$, $DC = x cm$ and distance b/w AB and DC is $4 cm$. Find the value of x and area of trapezium ABCD.



[Fig 5.]