INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF MATHEMATICS
CLASS IX
WORKSHEET NO-11
AREAS OF PARALLELOGRAMS AND TRIANGLES

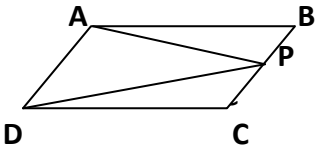
SECTION A: (1 MARK)

1. Find the area of parallelogram PQRS having base 11.2cm and altitude 6.5cm. (72.8sq.cm)

2. ABCD is a rectangle with O as any point in its interior if ar(ΔAOD)=3 sq.cm, ar(ΔBOC)= 6 sq.cm Then find ar(rectangle ABCD). (18sq.cm)

3. ABCD is a parallelogram , P is any point on CD if ar((ΔDPA)= 15 sq.cm, ar(ΔAPC)= 20 sq.cm then find the ar(ΔAPB). (35sq.cm)

SECTION B: (2 MARKS)



4. If area of parallelogram ABCD is 80 sq.cm. then find ar((ΔADP). (40sq.cm.)

5. In ΔABC, AD is the median to BC . E is point on AD such that AE=ED If ar (ΔABC)=144sq.cm find ar(ΔDEC). (36sq.cm.)

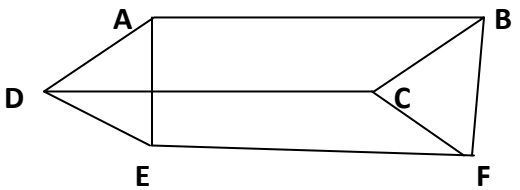
6. The area of a parallelogram ABCD is 36sq.cm. What is the area of ΔABC ? (18sq.cm.)

7. ΔABC is an equilateral triangle D and E are the mid-points of BC, AB respectively If BC=4cm Find ar(ΔBED) ($\sqrt{3}$ sq.cm.)

SECTION C: (3 MARKS)

8. Diagonals AC and BD of a quadrilateral ABCD intersect each other at P. Show that ar(ΔAPB) X ar(ΔCPD) = ar(ΔAPD) X ar(ΔBPC)

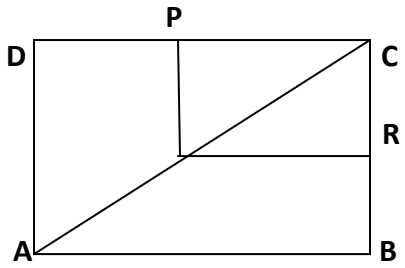
9. In the figure, ABCD, DCFE and ABFE are parallelograms Show that ar(ΔADE) = ar (ΔBCF)



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

SECTION D: (4 MARKS)

11. ABCD and PQRC are rectangles. Q is the mid-point of AC. Show that P is the mid-point of DC and R is the mid-point of BC. Also, find the ratio of ar(ABCD) and ar(PQRC) (1:4)



12. E is the mid-point of the median AD of ΔABC
Prove that $ar(\Delta ABE) = \frac{1}{4}\, ar\,(\Delta ABC)$
(CCE2010)

13. If BD is one of the diagonal of quadrilateral ABCD. AM and CN are $\perp$ from the points A and C respectively BD. If BD =12cm, AM=6cm and area of quadrilateral is 66 sq.cm. then find CN (5cm)