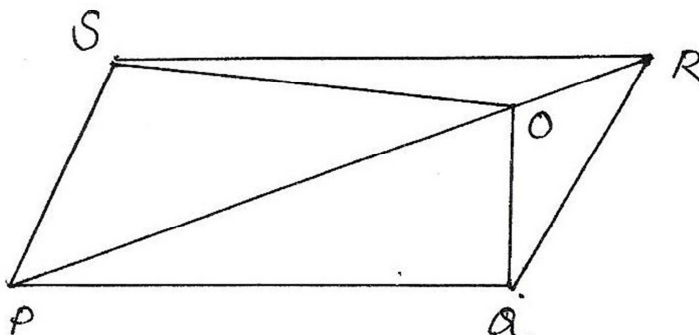


THE INDIAN SCHOOL, KINGDOM OF BAHRAIN

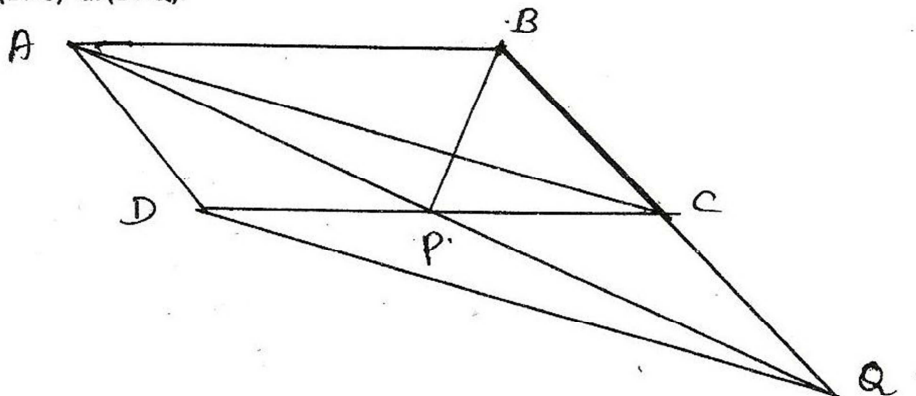
IX - MATHEMATICS ASSIGNMENT

CHAPTER 9 - AREA OF PARALLELOGRAMS AND TRIANGLES

1. ABCD is parallelogram with area 80 sq.cm. P is a point on BC. Find ar(ADP).
2. P, Q and R are the mid points of sides AB, AC and BC of triangle ABC. If ar(ABC) is 42 sq.cm , find ar(BPQR).
3. AD is the median of triangle ABC and BE is the median of triangle ABD. If ar(ABE)=10 sq.cm then find ar(ABC).
4. The diagonal of parallelogram ABCD intersect at a point O. Through O a line is drawn to intersect AB at P and DC at Q. Show that PQ divides the parallelogram into two parts of equal area.
5. ABC is a triangle. D is the midpoint of AB, P is any point on BC. Line CQ is drawn parallel to PD to intersect AB at Q. PQ is joined. Show that $ar(BPQ) = \frac{1}{2} ar(ABC)$.
6. ABCD is a parallelogram in which BC is produced to E such that CE=BC. AE intersects CD at F. Show that $ar(BDF) = \frac{1}{4} ar(ABCD)$.
7. ABCD is a trapezium in which AB || DC. O is the midpoint of BC. Through O, a line PQ || AD has been drawn which intersects AB at Q and DC produced at P. Prove that $ar(ABCD) = ar(AQPD)$.
8. O is any point on the diagonal PR of parallelogram PQRS. Prove $ar(PSO) = ar(PQO)$



9. ABCD is a parallelogram and BC is produced to a point Q such that AD=CQ. If AQ intersects DC at P, show that $ar(BPC) = ar(DPQ)$.

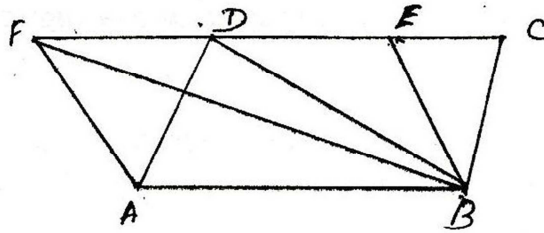


10. Area of the parallelogram ABCD is 90 sq.cm .Find

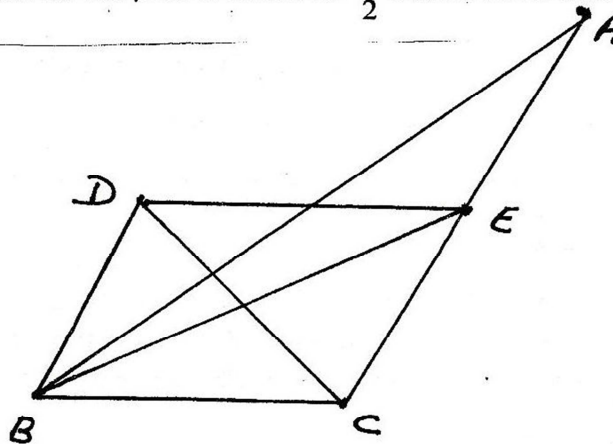
(i)Ar(ABEF)

(ii)ar(ABD)

(iii)ar(BEF)



11. In fig., $BD \parallel CA$. E is the mid-point of CA and $BD = \frac{1}{2} CA$. Prove that $ar(ABC) = 2ar(DBC)$.



CHAPTER 11

CONSTRUCTIONS

1. Draw a line segment of length 6.8cm. Bisect it and measure each part.
2. Construct a triangle whose sides are 5.6cm, 5cm and 6.8cm. Bisect the smallest angle and measure each part.
3. Construct a triangle ABC in which $BC = 5\text{cm}$, $\angle C = 60^\circ$ and $AC + AB = 7.5\text{ cm}$.
4. Construct a triangle ABC in which $BC = 4.5\text{cm}$, $\angle B = 45^\circ$ and $AB - AC = 2.5\text{cm}$.
5. Construct a triangle ABC whose perimeter is 12cm, $\angle B = 60^\circ$ and $\angle C = 45^\circ$.
6. Construct a ΔABC such that $BC = 4\text{cm}$, $\angle B = 60^\circ$ and $AC - BC = 2\text{cm}$.
7. Construct a ΔABC in which $\angle B = \angle C = 45^\circ$, $AB + BC + CA = 11\text{cm}$.