

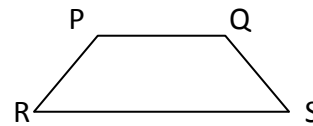


INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF MATHEMATICS
CLASS IX
WORKSHEET NO- 8
QUADRILATERALS



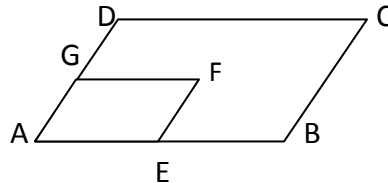
SECTION A: (1 MARK)

1. In a Trapezium PQRS Find x and y
 $\angle P=2x+10, \angle Q=92^\circ, \angle R=x+20, \angle S = y$



$(x=50^\circ,$
 $y= 88^\circ)$

2. In quadrilateral ABCD and AEFB are parallelograms and $\angle C=58^\circ$ find $\angle F$. $(\angle F=58^\circ)$

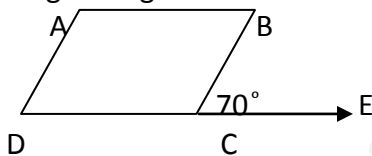


3. In quadrilateral ABCD, $\angle A=70^\circ, \angle B=130^\circ$, bisectors of $\angle C$ and $\angle D$ meet at O. Find $\angle COD$. $(\angle COD=100^\circ)$

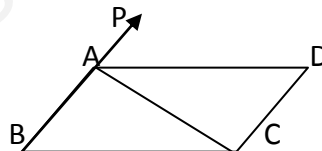
SECTION B: (2 MARKS)

4. ABCD is \parallel^m , AP is the bisector of $\angle A$ meeting BC at P and P is the mid- point of BC then prove that $AD = 2 \times CD$

5. In a given figure ABCD is a \parallel^m . Find $2 \angle ABC - \angle ADC$. (70°)



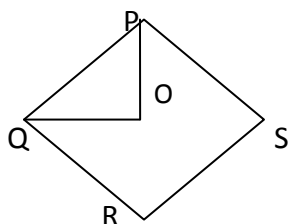
6. In $\triangle ABC, AB=AC, CD=AB$ and AD is the bisector of $\angle PAC$ Prove that ABCD is a \parallel^m



7. In a quadrilateral ABCD, the angles $\angle A, \angle B$ and $\angle C$ are in the ratio 2:3:1 and $\angle D = 60^\circ$ find other angles. $(100^\circ, 150^\circ, 50^\circ)$

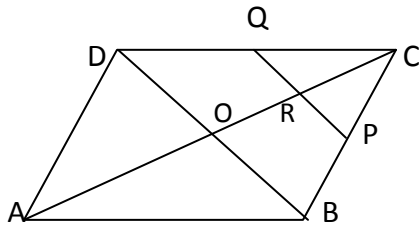
SECTION C: (3 MARKS)

8. In the given figure, PQRS is a \parallel^m PO and QO are the bisectors of $\angle P$ and $\angle Q$ respectively. Then prove that $\angle QOP = 90^\circ$ (HOTS)



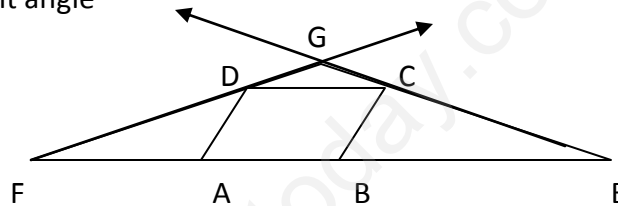
9. Diagonals of quadrilateral ABCD bisect each other. If $\angle A = 35^\circ$ then find $\angle B$ (NCERT EXEMPLAR) (145°)

10. BD is one of the diagonal of a quadrilateral ABCD. AM and CN are perpendiculars from A and C respectively on BD. Show that $\text{ar}(\square ABCD) = \frac{1}{2} BD (AM + CN)$.
11. ABCD is a \parallel^m P & Q are mid –points of BC & CD respectively Show that $CR = \frac{1}{4} AC$



SECTION D: (4 MARKS)

12. Show that four triangles formed by joining the mid points of the three sides of a triangle are congruent to each other.
13. In the figure ABCD is a Rhombus AB is extended to points F and E such that $AF = AB = BE$. FD and EC are extended to meet at G. Show that $\angle FGE$ is a right angle



14. P,Q,R and S are respectively the mid –points of the sides of AB,BC ,CD and AD of a quadrilateral ABCD such that AC is perpendicular to BD. Prove that PQRS is a rectangle.
(NCERT EXEMPLAR)
15. A diagonal of a parallelogram bisects one of its angles. Show that it is a rhombus.
(NCERT EXEMPLAR)