



INDIAN SCHOOL DARSAIT
DEPARTMENT OF MATHEMATICS



Subject : MATHEMATICS

Topic : CO-ORDINATE

Date : 20-10-2019

Worksheet No: 7

GEOMETRY

Resource Person: Mrs. Anu Likson

Name of the Student _____ Class & Division: X _____ Roll Number : _____

S.No.

Section A-[Basic skills]

1. $35 - 0.006 =$
2. $125 \times 450 =$
3. $234.56 \times 10000 =$
4. $300 - 25.5 =$
5. $4(3 - 5) + \frac{5(2 - 6)}{4} =$

Sl.No.

Section B -[Chapter based questions]

Marks

1. Find the values of k , if the points A(2,3) , B(4,k) and C(6,-3) are collinear. 3
2. If P(x,y) is equidistant from the points A(7,1) and B(3,5) , find the relation between x and y. 3
3. In what ratio does the point C(4,5) divides the join of A(2,3) and B(7,8)? 3
4. In what ratio is the line segment joining the points A(-2,-3) and B(3,7) divided by the y-axis? Also find the co-ordinates of the point of division. 2
5. The line segment joining the points A(4,-5) and B(4,5) is divided by the point P such that $\frac{AP}{AB} = \frac{2}{5}$. Find the co-ordinates of P. 3
6. The line segment joining the points A(3,-4) and B(1,2) is trisected at the points P(p ,-2) and Q($\frac{5}{3}$, q) , find the values of p and q. 4
7. If (2,p) is the midpoint of the line segment joining the points A(6,-5) and B(-2,11) , find the value of p. 3
8. Find the distance between the points ($-\frac{8}{5}$, 2) and ($\frac{2}{5}$, 2) 2
9. Find the area of the quadrilateral ABCD whose vertices are A(1,0) , B(5,3) C(2,7) and D(-2,4). 4
10. Find the area of the triangle formed by joining the midpoints of the sides of the triangle whose vertices are (2,2) , (4,4) and (2,6). 4



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11. If $P(5, -7)$, $Q(4, 7)$ and $R(6, -3)$ are the vertices of ΔPQR , M is the midpoint of QR and A is a point on PM joined such that $\frac{PA}{AM} = 2$, find the coordinates of A . 3
12. If $(a, 0)$, $(0, b)$ and $(3, 2)$ are collinear, show that $2a + 3b - ab = 0$ 4
13. Coordinates of houses of Sonu and Laly are $(7, 3)$ and $(4, 3)$ respectively. The coordinates of their school are $(2, 2)$. If both leave their house at the same time in the morning and also reach school in time then (a) who travel faster (b) which value is depicted in this question? 4

SECTION C [HOT QUESTIONS]

1. If $P(x, y)$ is any point on the line joining the points $A(a, 0)$ and $B(0, b)$, then show that $\frac{x}{a} + \frac{y}{b} = 1$ 3
2. Show that the point $A(a, b + c)$, $B(b, c + a)$ and $C(c, a + b)$ are collinear. 3
3. Prove that diagonals of a rectangle bisect each other and are equal. 3
4. Determine the ratio in which the straight line $x - y + 2 = 0$ divides the line segment joining $(-1, 3)$ and $(9, 8)$. 3

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