

X - Mathematics Assignment No-04 - Co-ordinate geometry.

- Q1. The co-ordinate of the centre of a circle is $(2, 3)$. If the co-ordinate of one end of the largest chord is $(5, 7)$. Find the other co-ordinate of the chord
- Q2. The vertices of a triangle are $A(3, 4)$, $B(7, 2)$ and $C(-2, -5)$. Find the length of the median through the vertex A .
- Q3. Find the co-ordinate of a point which is three-fourth of the way from $(3, 1)$ to $(-2, 5)$.
- Q4. The mid points of the sides of a triangle are $A(2, 1)$, $B(1, 0)$ and $C(-1, 3)$. Find the co-ordinates of the vertices of the triangle.
- Q5. Find the co-ordinates of the points which divide the line segment joining $A(5, -6)$ and $B(7, -8)$ into four equal parts

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Q6. If A and B are $A(-3, 2)$; $B(5, 6)$ respectively, find the co-ordinates of P such that $AP = \frac{2}{7} AB$ and P lies on the line segment AB. [Hint: Find ratio $AP : PB$ then proceed]

Q7. Find the area of an equilateral triangle whose vertices are $A(-3, 0)$, $B(3, 0)$ and $C(0, 3\sqrt{3})$ [Hint: $\Delta = \frac{\sqrt{3}}{4} \text{ side}^2$]

Q8. Find the area of a rhombus whose co-ordinates are $A(0, 5)$, $B(-2, -2)$, $C(5, 0)$ and $D(7, 7)$
[Hint: area = $\frac{1}{2}$ product of diagonals]

Q9. Find the area of a square whose co-ordinates are $A(3, 2)$, $B(0, 5)$, $C(-3, 2)$ and $D(0, 1)$

Q10 Find p and q if $A(2, p)$, $B(5, 4)$, $C(4, 7)$ and $D(q, 4)$ are the vertices of a parallelogram.

ANSWERS

(Q1) $(-1, -1)$	(Q5) $C(\frac{11}{2}, -\frac{13}{2})$	(Q8) 45 sq units
(Q2) $\sqrt{122}/2 \text{ units}$	$D(6, -7), E(\frac{13}{2}, -\frac{15}{2})$	(Q9) 18 " "
(Q3) $(-\frac{3}{4}, 4)$	Q6. $(\frac{5}{7}, \frac{22}{7})$	(Q10) $p=1, q=1$
(Q4) $(0, 4), (4, -2), (-2, 2)$	(Q7) $9\sqrt{3} \text{ sq units}$	