

CLASS 10 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 7: HOTS: Coordinate Geometry (Class 10)

Daily practice problems: 8 questions with an answer key

Try every question on your own first. The answer key is on the last page.

1. Find the point on the y-axis which is equidistant from $(-5, 2)$ and $(9, -2)$.
2. Find the ratio in which the point $(2, y)$ divides the segment joining $(-4, 3)$ and $(6, 8)$, and find y .
3. Find k so that $(k, 2)$, $(4, 6)$ and $(5, 8)$ are collinear.
4. Show that $(0, -1)$, $(-2, 3)$, $(6, 7)$ and $(8, 3)$ are the vertices of a rectangle.
5. Find the area of the triangle with vertices $(1, 2)$, $(4, 6)$ and $(7, 2)$.
6. Find the coordinates of the points which divide the segment joining $(4, -1)$ and $(-2, -3)$ into three equal parts.
7. The midpoint of the segment joining $(a, 5)$ and $(7, b)$ is $(3, 4)$. Find a and b .
8. The point (x, y) is equidistant from $(3, 6)$ and $(-3, 4)$. Find the relation between x and y .

Answer Key

1. $(0, -7)$.
2. Ratio 3 : 2 and $y = 6$.
3. $k = 2$.
4. Opposite sides $\sqrt{20}$ and $\sqrt{80}$ are equal in pairs, and the diagonals are both $\sqrt{100}$.
5. 12 square units.
6. $(2, -\frac{5}{3})$ and $(0, -\frac{7}{3})$.
7. $a = -1$ and $b = 3$.
8. $3x + y - 5 = 0$.

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