



SHIKSHA CLASSES

Sub. : Maths.
Std. X (CBSE)

Question Paper
7 : Co-ordinate Geometry

Total Marks : 30
Time : 1 hour

Section : A (Each 1 Mark)

Multiple choice Questions (MCQs).

- Q.1 : The distance of the point P(-6, 8) from the origin is
a) 8 units b) $2\sqrt{7}$ units c) 10 units d) 6 units
- Q.2 : The distance of the point P(2, 3) from the x-axis is
a) 2 units b) 3 units c) 1 units d) 5 units
- Q.3 : The opposite vertices of a square are (5, -4) and (-3, 2). The length of its diagonal is
a) 6 b) 8 c) 10 d) 12
- Q.4 : Find the value of k if the distance between (k, 3) and (2, 3) is 5
a) 5 b) 6 c) 7 d) 8
- Q.5 : If the distance between the points (3, a) and (4, 1) is $\sqrt{10}$, then find the values of a
a) 3, -1 b) 2, -2 c) 4, -2 d) 5, -3
- Q.6 : If the point (x, y) is equidistant from the points (2, 1) and (1, -2) then
a) $x + 3y = 0$ b) $3x + y = 0$ c) $x + 2y = 0$ d) $2y + 3x = 0$
- Q.7 : The distance of the midpoint of the line segment joining the points (6, 8) and (2, 4) from the point (1, 2) is
a) 3 b) 4 c) 5 d) 6
- Q.8 : The end points of diameter of circle are (2, 4) and (-3, -1). The radius of the circle is
a) $\frac{5\sqrt{2}}{2}$ units b) $5\sqrt{2}$ units c) $3\sqrt{2}$ units d) $\frac{\pm 5\sqrt{2} \text{ units}}{2}$
- Q.9 : If the point P(k, 0) divides that line segment joining the points Q(2, -2) and R(-7, 4) in the ratio 1 : 2, then the value of k is
a) 1 b) 2 c) -2 d) -1

For question number 10 to 11 two statements are given one labeled Assertion and other labeled Reason select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below

- a) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion
b) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.
c) assertion is true but the reason is false.
d) both assertion and reason are false.

Q.10 : **Assertion :** The distance point P(2,3) from the x-axis is 3.

Reason: The distance from x-axis is equal to its ordinate.

Q.11 : **Assertion:** The point(6,0) lies on x-axis.

Reason: the point (0,7) lies on y-axis.

Section : B (Each 2 Marks)

Q.12 : Find a point on the y-axis which is equidistant from the point A(6, 5) and B(-4, 3)

OR

Find the value of a so that the point (3, a) lies on the line represented by $2x - 3y + 5 = 0$.

Q.13 : In what ratio does the x-axis divide the line segment joining the points (2, -3) and (5, 6) ?

Also find the co-ordinates of the point of intersection.

Section : C (Each 3 Marks)

Q.14 : Determine the ratio in which the line $3x + y - 9 = 0$ divides the segment joining the points (1, 3) and (2, 7).

Q.15 : If P and Q are two points whose co-ordinates are $(at^2, 2at)$ and $(\frac{a}{t^2}, \frac{2a}{t})$ respectively and S is the point (a, 0). Show that $\frac{1}{SP} + \frac{1}{SQ}$ is independent of t.

OR

Point P divides the line segment joining the points A(2, 1) and B(5, -8) such that $\frac{AP}{AB} = \frac{1}{3}$,

If P lies on the line $2x - y + k = 0$, find the value of k.

Section - D(Each 5 Marks)

Q.16 : Show that the points (a, a), (-a, -a) and $(-\sqrt{3}a, \sqrt{3}a)$ are the vertices of an equilateral triangle. Also find it's area.

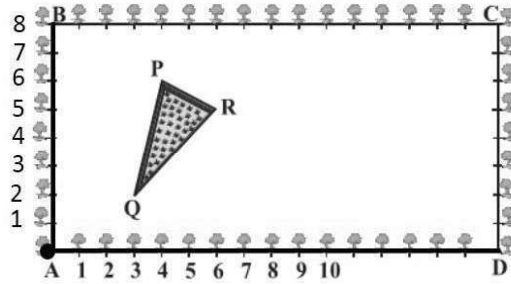
OR

Find the Co-ordinates of the circumcentre of triangle whose vertices are (8, 6), (8, -2) and (2, -2). Also, find its circum-radius.

Section : E

Q.17 : **Case study :**

The Class X students of a secondary school in Krishinagar have been allotted a rectangular plot of land for their gardening activity. Sapling of Gulmohar are planted on the boundary at a distance of 1m from each other. There is a triangular grassy lawn in the plot as shown in the below figure. The students are to sow seeds of flowering plants on the remaining area of the plot.



- i) Taking A as origin, find the coordinates of the vertices of the triangle ΔPQR . 1
- ii) What is the midpoint of side PQ, when A is the origin? 1
- iii) What will be the coordinates of the vertices of a ΔPQR if C is the origin? 2

OR

What is the mid point of side QR, when C is the origin?

* * *

SHIKSHA CLASSES, BHANDARPUR

BECOME AN ACE IN JEE & NEET



SHIKSHA CLASSES

Believe & Achieve

JEE | NEET | Previsa (8-10)

📞 8625055707 | 8623085707 🌐 shikshaclasses.co.in

M-19, MHADA Colony, Khat Road, Bhandara



Learn with Jaiswal sir