CBSE 10th Coordinate geometry Unsolved Paper

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Q.1. Find the distance between the following pairs of points:

(i) (2, 3), (4, 1) (ii) (−5, 7), (−1, 3) (iii) (a, b), (− a, − b)

Q.2. Determine if the points (1, 5), (2, 3) and (− 2, − 11) are collinear.

Q.3. Check whether (5, − 2), (6, 4) and (7, − 2) are the vertices of an isosceles triangle.

Q.4. Find the values of y for which the distance between the points P (2, − 3) and Q (10, y) is 10 units.

Q.5. If Q (0, 1) is equidistant from P (5, − 3) and R (x, 6), find the values of x. Also find the distance QR and PR.

Q.6. Find a relation between x and y such that the point (x, y) is equidistant from the point (3, 6) and (− 3, 4).

Q.7. Find the area of the triangle whose vertices are:

(i) (2, 3), (− 1, 0), (2, − 4) (ii) (− 5, − 1), (3, − 5), (5, 2)

Q.8. In each of the following find the value of 'k', for which the points are collinear.

(i) (7, − 2), (5, 1), (3, − k) (ii) (8, 1), (k, − 4), (2, − 5)

Q.9. Determine the ratio in which the line $2x + y - 4 = 0$ divides the line segment joining the points A(2, − 2) and B(3, 7)

Q.10. Find a relation between x and y if the points (x, y), (1, 2) and (7, 0) are collinear.

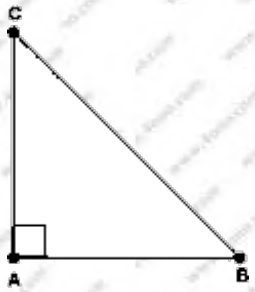
Q.11. Find the centre of a circle passing through the points (6, − 6), (3, − 7) and (3, 3).

Q.12. Find the value of a when the distance between the points (3, a) and (4, 1) is $\sqrt{10}$.

Q.13. If the points (2, 1) and (1, -2) are equidistant from the point (x, y) from (-3, 0) as well as from (3, 0) are 4.

Q.14. Prove that the points A (1, 7), B (4, 2), C (−1, −1) and D (−4, 4) are the vertices of a square.

Q.15. Prove that the points (3, 0) (6, 4) and (-1, 3) are vertices of a right angled isosceles triangle.



Q.16. Prove that the points (2, 3), (-4, -6) and (1, 3/2) do not form a triangle.

Q.17. Prove that the points (— 2, 5), (0, 1) and (2, — 3) are collinear.

Q.18. Find the value of k, if the point P (0, 2) is equidistant from (3, k) and (k, 5).

Q.19. If two opposite vertices of a square are (5, 4) and (1, —6), find the coordinates of its remaining two vertices.

Q.20. Find a point on the x-axis which is equidistant from the points (7, 6) and (—3, 4).

Q.22. Find the points of trisection of the line segment joining the points: (i) (5, —6) and (— 7, 5),

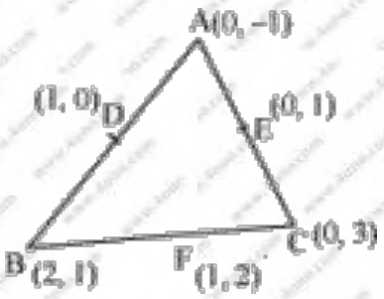
(ii) (3, —2) and (—3, —4)

(iii) (2, —2) and (—7, 4).

Q.23. If A (—1, 3), B (1, —1) and C (5, 1) are the vertices of a triangle ABC, find the length of the median through A

Q.24. If the coordinates of the mid-points of the sides of a triangle be (3, —2), (—3, 1) and (4, — 3), then find the coordinates of its vertices.

Q.25. Find the area of the triangle formed by joining the mid-points of the sides of the triangle whose vertices are (0, − 1), (2, 1) and (0, 3). Find the ratio of this area to the area of the given triangle. Answer:



Q.26. Find the distance between the following pair of points:

(i) (–6,7) and (– 1, –5)

(ii) (a+b, b+c) and (a-b, c-b)

(iii) (a sin α, b cos α –) and (–a cos α, b sin α)

(iv) (a,0) and (0,b)

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