

EduSahara™ Learning Center Assignment**Grade : Class X, CBSE****Chapter : Coordinate Geometry****Name : Section Formula**

1. The mid-point of the join of points $((-4), 7)$ and $(3, 8)$ is

- (i) $(\frac{3}{2}, \frac{19}{2})$ (ii) $(\frac{1}{2}, \frac{13}{2})$ (iii) $((-\frac{3}{2}), \frac{17}{2})$ (iv) $((-\frac{5}{2}), \frac{11}{2})$ (v) $((-\frac{1}{2}), \frac{15}{2})$

Find the point that divides the join of points $(2, (-7))$ and

2. $((-7), 0)$ internally in the ratio $6 : 1$

- (i) $((-\frac{54}{7}), (-3))$ (ii) $((-\frac{40}{7}), (-1))$ (iii) $((-\frac{33}{7}), (-2))$
 (iv) $((-\frac{47}{7}), 0)$ (v) $((-\frac{26}{7}), 1)$

Find the coordinates of the mid points of the sides of the triangle formed by

3. $((-5), (-3)), (2, (-4))$ and $(7, (-6))$

- (i) $((-\frac{5}{2}), (-\frac{5}{2})), (\frac{9}{2}, (-5)), (1, (-\frac{9}{2}))$
 (ii) $((-\frac{3}{2}), (-\frac{7}{2})), (\frac{9}{2}, (-5)), (2, (-\frac{11}{2}))$
 (iii) $((-\frac{3}{2}), (-\frac{7}{2})), (\frac{9}{2}, (-5)), (1, (-\frac{9}{2}))$
 (iv) $((-\frac{3}{2}), (-\frac{7}{2})), (\frac{9}{2}, (-5)), ((-1), (-\frac{13}{2}))$
 (v) $((-\frac{3}{2}), (-\frac{7}{2})), (\frac{13}{2}, (-3)), (1, (-\frac{9}{2}))$

Find the coordinates of the vertices of the triangle,

4. the mid points of whose sides are $((-\frac{11}{2}), (-\frac{13}{2})), ((-5), (-\frac{5}{2}))$ and $((-\frac{13}{2}), (-3))$

- (i) $((-7), (-7)), ((-4), (-6)), ((-6), 1)$
 (ii) $((-8), (-6)), ((-4), (-6)), ((-6), 1)$
 (iii) $((-7), (-7)), ((-4), (-6)), ((-8), (-1))$
 (iv) $((-7), (-7)), ((-2), (-4)), ((-6), 1)$
 (v) $((-7), (-7)), ((-4), (-6)), ((-5), 0)$

5. The mid-point of the join of the points (x_1, y_1) and (x_2, y_2) is

- (i) $(\frac{x_1 - x_2}{2}, \frac{y_1 - y_2}{2})$ (ii) $(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2})$

$$2 \quad 2 \quad 3 \quad 3$$

$$(iii) \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) (iv) \left(\frac{x_1 - x_2}{3}, \frac{y_1 - y_2}{3} \right)$$

$$(v) \left(\frac{y_1 - y_2}{2}, \frac{x_1 - x_2}{2} \right)$$

The coordinates of the point dividing the join of points

6. (x_1, y_1) and (x_2, y_2) internally in the ratio $m:n$ are

$$(i) \left(\frac{nx_2 - mx_1}{m - n}, \frac{ny_2 - my_1}{m - n} \right) (ii) \left(\frac{nx_2 + mx_1}{m + n}, \frac{ny_2 + my_1}{m + n} \right)$$

$$(iii) \left(\frac{mx_2 + nx_1}{m + n}, \frac{my_2 + ny_1}{m + n} \right) (iv) \left(\frac{mx_2 - nx_1}{m - n}, \frac{my_2 - ny_1}{m - n} \right)$$

7. If the point $\left(\frac{8}{3}, \frac{10}{3} \right)$ divides the join of points $(2, (-4))$ and (x, y) in the ratio $6 : 3$, find (x, y)

$$(i) (3, 7) (ii) (1, 5) (iii) (2, 8) (iv) (5, 9) (v) (4, 6)$$

8. Find the ratio in which point $\left(-\frac{42}{11}, -\frac{17}{11} \right)$ divides the join of points $((-6), (-1))$ and $(6, (-4))$

$$(i) 2 : 9 (ii) 2 : 12 (iii) 2 : 7 (iv) 3 : 9 (v) 1 : 9$$

9. One end of the diameter of a circle is $(7, (-5))$. If the centre is $(2, (-3))$, find the other end of the diameter

$$(i) ((-3), (-1)) (ii) ((-2), (-2)) (iii) ((-4), 0) (iv) ((-1), 1) (v) ((-5), (-3))$$

10. Find the coordinates of the points of trisection of the line segment joining the points $(8, 5)$ and $((-2), 6)$

$$(i) \left(\frac{14}{3}, \frac{16}{3} \right), \left(\frac{4}{3}, \frac{17}{3} \right) (ii) \left(\frac{20}{3}, \frac{22}{3} \right), \left(\frac{4}{3}, \frac{17}{3} \right)$$

$$(iii) \left(\frac{8}{3}, \frac{10}{3} \right), \left(\frac{4}{3}, \frac{17}{3} \right) (iv) \left(\frac{14}{3}, \frac{16}{3} \right), \left(\frac{1}{3}, \frac{20}{3} \right)$$

$$(v) \left(\frac{17}{3}, \frac{13}{3} \right), \left(\frac{4}{3}, \frac{17}{3} \right)$$

11. In what ratio is the join of $(6, 1)$ and $(0, (-5))$ divided by x-axis?

- (i) $0 : 5$ (ii) $2 : 5$ (iii) $2 : -1$ (iv) $1 : 5$
-

12. In what ratio is the join of $(6, 8)$ and $(-1, -8)$ divided by y-axis?

- (i) $4 : 3$ (ii) $6 : 1$ (iii) $6 : -1$ (iv) $6 : 3$
-

The centre of a circle is $(0, -3)$.

13.

Find the other end of the diameter whose one end point is $(-1, 2)$

- (i) $(-8, 1)$ (ii) $(-1, 8)$ (iii) $(1, -8)$ (iv) $(1, 8)$ (v) $(-1, -8)$
-

Find the coordinates of the midpoints of the sides of the quadrilateral

14.

formed by $(-1, 3)$, $(4, 6)$, $(1, 8)$ and $(-2, 8)$

- (i) $(\frac{3}{2}, \frac{9}{2})$, $(\frac{5}{2}, 7)$, $(-\frac{5}{2}, 6)$, $(-\frac{3}{2}, \frac{11}{2})$
 (ii) $(\frac{3}{2}, \frac{9}{2})$, $(\frac{5}{2}, 7)$, $(\frac{1}{2}, 7)$, $(-\frac{3}{2}, \frac{11}{2})$
 (iii) $(\frac{3}{2}, \frac{9}{2})$, $(\frac{5}{2}, 7)$, $(-\frac{1}{2}, 8)$, $(-\frac{3}{2}, \frac{11}{2})$
 (iv) $(\frac{3}{2}, \frac{9}{2})$, $(\frac{5}{2}, 7)$, $(-\frac{1}{2}, 8)$, $(-\frac{5}{2}, \frac{13}{2})$
 (v) $(\frac{7}{2}, \frac{13}{2})$, $(\frac{5}{2}, 7)$, $(-\frac{1}{2}, 8)$, $(-\frac{3}{2}, \frac{11}{2})$
-

15. Find the point that bisects $(0, -8)$ and $(4, -8)$

- (i) $(4, -6)$ (ii) $(2, -8)$ (iii) $(1, -7)$ (iv) $(0, -10)$ (v) $(3, -9)$
-

16. If point P $(2, -\frac{1}{2})$ bisects A $(-4, 5)$ and B (x, y) , find (x, y)

- (i) $(7, -5)$ (ii) $(9, -7)$ (iii) $(10, -4)$ (iv) $(6, -8)$ (v) $(8, -6)$
-

In what ratio is the join of $(0, -8)$ and $(-6, 2)$

17.

divided by the line $(-y - 7) = 0$?

- (i) $1 : 11$ (ii) $1 : 6$ (iii) $2 : 9$ (iv) $0 : 9$ (v) $1 : 9$
-

In what ratio is the join of $(-3, -6)$ and

18.

$(7, 2)$ divided by the line $(x - 3) = 0$?

- (i) $6 : 4$ (ii) $7 : 4$ (iii) $6 : 2$ (iv) $5 : 4$ (v) $6 : 6$
-

19.

$(\quad)(\quad)(\quad)$

Three vertices of a parallelogram are $(-6, -3)$, $(0, -3)$ and $(2, 2)$.

Find the fourth vertex

- (i) $(-6, 0)$ (ii) $(-4, 2)$ (iii) $(-5, 3)$ (iv) $(-2, 4)$ (v) $(-3, 1)$
-

Find the centre of the circle, the endpoints of whose

20. diameter are $(-8, -7)$ and $(0, 8)$

- (i) $(4, -\frac{1}{2})$ (ii) $(-4, -\frac{1}{2})$ (iii) $(-4, \frac{1}{2})$ (iv) $(\frac{1}{2}, -4)$ (v) $(4, \frac{1}{2})$
-

The line $-22x + 2y - 28 = 0$

21. bisects which of the following pairs of points?

- (i) $(-5, 0)$, $(4, -3)$ (ii) $(-7, -2)$, $(4, -3)$ (iii) $(-6, -3)$, $(4, -3)$
 (iv) $(-9, -4)$, $(4, -3)$ (v) $(-7, -2)$, $(3, -2)$
-

A and B are two points on the x-axis and y-axis respectively.

22. If $(-2, -4)$ is the mid-point of the join of A and B, find A and B

- (i) $(-2, 2)$, $(0, -8)$ (ii) $(-6, -2)$, $(0, -8)$
 (iii) $(-4, 0)$, $(0, -8)$ (iv) $(-3, -1)$, $(0, -8)$
 (v) $(-4, 0)$, $(-1, -7)$
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Assignment Key

- 1) (v)
- 2) (ii)
- 3) (iii)
- 4) (i)
- 5) (iii)
- 6) (iii)
- 7) (i)
- 8) (i)
- 9) (i)
- 10) (i)
- 11) (iv)
- 12) (ii)
- 13) (iii)
- 14) (iii)
- 15) (ii)
- 16) (v)
- 17) (v)
- 18) (i)
- 19) (ii)
- 20) (iii)
- 21) (ii)
- 22) (iii)