EduSahara™ Assignment

Name : Section Formula

Chapter : Coordinate Geometry

Grade : CBSE Grade X

1. The mid-point of the join of points $((-2),(-1))$ and $(8,7)$ is

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

2. Find the point that divides the join of points $(4,6)$ and $(2,5)$ internally in the ratio $2:3$

   (i) $(\frac{16}{5},\frac{28}{5})$ (ii) $(\frac{11}{5},\frac{33}{5})$ (iii) $(\frac{6}{5},\frac{18}{5})$ (iv) $(\frac{26}{5},\frac{38}{5})$ (v) $(\frac{21}{5},\frac{23}{5})$

3. Find the coordinates of the mid points of the sides of the triangle formed by $((-6),5),((-1),6)$ and $((-4),7)$

   (i) $((-\frac{7}{2}),\frac{11}{2}),((-\frac{5}{2}),\frac{13}{2}),((-7),4)$ (ii) $((-\frac{9}{2}),\frac{13}{2}),((-\frac{5}{2}),\frac{13}{2}),((-5),6)$

   (iii) $((-\frac{7}{2}),\frac{11}{2}),((-\frac{5}{2}),\frac{13}{2}),((-4),5)$ (iv) $((-\frac{7}{2}),\frac{11}{2}),((-\frac{1}{2}),\frac{17}{2}),((-5),6)$

   (v) $((-\frac{7}{2}),\frac{11}{2}),((-\frac{5}{2}),\frac{13}{2}),((-5),6)$

4. Find the coordinates of the vertices of the triangle, the mid points of whose sides are $(7,\frac{3}{2}),(6,1)$ and $(7,\frac{15}{2})$

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

   (v) $(8,8),(8,(-3)),(6,7)$

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

   (v) $(\frac{x_1-x_2}{3},\frac{y_1-y_2}{3})$

6. The coordinates of the point dividing the join of points (x_1,y_1) and (x_2,y_2) internally in the ratio m:n are

   (i) $(\frac{nx_2+mx_1}{m+n},\frac{ny_2+my_1}{m+n})$ (ii) $(\frac{mx_2-nx_1}{m-n},\frac{my_2-ny_1}{m-n})$ (iii) $(\frac{nx_2-mx_1}{m-n},\frac{ny_2-my_1}{m-n})$

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

7. If the point $((-2),\frac{19}{7})$ divides the join of points $((-7),(-8))$ and (x,y) in the ratio $5:2$, find (x,y)

   (i) $(2,9)$ (ii) $(0,7)$ (iii) $((-1),8)$ (iv) $(1,6)$ (v) $((-2),5)$

8. Find the ratio in which point $(1,\frac{13}{4})$ divides the join of points $(1,5)$ and $(1,(-2))$

   (i) $3:6$ (ii) $1:6$ (iii) $2:9$ (iv) $2:3$ (v) $2:6$

9. One end of the diameter of a circle is $((-8),7)$. If the centre is $((-\frac{5}{2}),\frac{11}{2})$, find the other end of the diameter

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

10. Find the coordinates of the points of trisection of the line segment joining the points $((-4),(-7))$ and $((-5),(-7))$

(i) $((-\frac{13}{3}),(-7)),((-\frac{17}{3}),(-6))$ (ii) $((-\frac{13}{3}),(-7)),((-\frac{14}{3}),(-7))$ (iii) $((-\frac{19}{3}),(-9)),((-\frac{14}{3}),(-7))$

(iv) $((-\frac{10}{3}),(-8)),((-\frac{14}{3}),(-7))$ (v) $((-\frac{7}{3}),(-5)),((-\frac{14}{3}),(-7))$

11. In what ratio is the join of $((-4),4)$ and $((-1),(-3))$ divided by x-axis?

(i) 5:3 (ii) 4:6 (iii) 4:1 (iv) 4:3 (v) 3:3

12. In what ratio is the join of $(8,(-4))$ and $((-4),0)$ divided by y-axis?

(i) 8:9 (ii) 8:4 (iii) 8:7 (iv) 10:9 (v) 8:2

13. The centre of a circle is $(\frac{3}{2},\frac{1}{2})$. Find the other end of the diameter whose one end point is $(6,(-4))$

(i) $((-3),5)$ (ii) $(5,(-3))$ (iii) $((-3),(-5))$ (iv) $(3,5)$ (v) $(3,(-5))$

14. Find the coordinates of the midpoints of the sides of the quadrilateral formed by $((-6),4),((-2),9),((-8),10)$ and $((-8),9)$

(i) $((-4),\frac{13}{2}),((-5),\frac{19}{2}),((-7),\frac{17}{2}),((-7),\frac{13}{2})$ (ii) $((-4),\frac{13}{2}),((-5),\frac{19}{2}),((-8),\frac{19}{2}),((-8),\frac{15}{2})$

(iii) $((-4),\frac{13}{2}),((-5),\frac{19}{2}),((-10),\frac{15}{2}),((-7),\frac{13}{2})$ (iv) $((-4),\frac{13}{2}),((-5),\frac{19}{2}),((-8),\frac{19}{2}),((-7),\frac{13}{2})$

(v) $((-2),\frac{17}{2}),((-5),\frac{19}{2}),((-8),\frac{19}{2}),((-7),\frac{13}{2})$

15. Find the point that bisects $(8,(-2))$ and $(1,6)$

(i) $(\frac{9}{2},2)$ (ii) $(\frac{11}{2},1)$ (iii) $(\frac{7}{2},3)$ (iv) $(\frac{13}{2},4)$ (v) $(\frac{5}{2},0)$

16. If point $P((-6),(-\frac{5}{2}))$ bisects $A((-4),(-6))$ and $B(x,y)$, find (x,y)

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

17. In what ratio is the join of $((-4),(-9))$ and $((-1),6)$ divided by the line $(-y+1)=0$?

(i) 10:5 (ii) 11:5 (iii) 10:7 (iv) 10:3 (v) 9:5

18. In what ratio is the join of $((-2),5)$ and $(5,7)$ divided by the line $x=0$?

(i) 2:3 (ii) 3:5 (iii) 2:5 (iv) 2:8 (v) 1:5

19. Three vertices of a parallelogram are $((-6),(-2)),(1,(-2))$ and $(5,1)$. Find the fourth vertex

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

20. Find the centre of the circle, the endpoints of whose diameter are $((-6),(-4))$ and $((-5),(-8))$

(i) $(\frac{11}{2},6)$ (ii) $((-\frac{11}{2}),6)$ (iii) $((-6),(-\frac{11}{2}))$ (iv) $((-\frac{11}{2}),(-6))$ (v) $(\frac{11}{2},(-6))$

21. The line $(7x+y+11)=0$ bisects which of the following pairs of points?

(i) $((-3),1),(2,0)$ (ii) $((-5),(-1)),(1,1)$ (iii) $((-5),(-1)),(2,0)$ (iv) $((-7),(-3)),(2,0)$

(v) $((-4),(-2)),(2,0)$

22. A and B are two points on the x-axis and y-axis respectively. If $((-1),5)$ is the mid-point of the join of A and B, find A and B

(i) $((-1),(-1)),(0,10)$ (ii) $((-4),(-2)),(0,10)$ (iii) $((-2),0),((-1),11)$ (iv) $((-2),0),(0,10)$

(v) $(0,2),(0,10)$

Assignment Key

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