1. The value of y, if the distance between the points $(2,y)$ and $(-4,3)$ is 10 is

(a) 6 (b) -11 (c) 5 (d) 11

2. The distance between the points $(a\cos\theta+b\sin\theta,0)$ and $(0,a\sin\theta-b\cos\theta)$, is

(a) a^2+b^2 (b) a^2-b^2 (c) $\sqrt{a^2+b^2}$ (d) $\sqrt{a^2-b^2}$

3. If the point $P(x,y)$ is equidistant from the points $A(5,1)$ and $B(1,5)$, then

(a) $y=3x$ (b) $x=y$ (c) $x=-8y$ (d) $-8x=y$

4. The distance between the points $A(0,6)$ and $B(0,-2)$ is

(a) 6 units (b) 8 units (c) 4 units (d) 2 units

5. The distance of the point $P(2,3)$ from the x-axis is

(a) 2 units (b) 3 units (c) 1 units (d) 2 units

6. The points $A(9,0),B(9,6),C(-9,6)$ and $D(-9,0)$ are the vertices of a

(a) square (b) rectangle (c) rhombus (d) trapezium

7. The mid-point of the line segment joining the points $A(-2,8)$ and $B(-6,-4)$ is

(a) $(-4,-6)$ (b) $(2,6)$ (c) $(-4,2)$ (d) (4, 2)

8. If the distance between the points $(2,-2)$ and $(-1,x)$ is 5, one of the values of x is

(a) -2 (b) 2 (c) -1 (d) 1

9. The points which lie on the perpendicular bisector of the line segment joining the points $A(-2,-5)$ and $B(2,5)$ is

(a) $(0,0)$ (b) $(0,2)$ (c) $(2,0)$ (d) $(-2,0)$

10. The point which divides the line segment joining the points $(7,-6)$ and $(3,4)$ in ratio 1: 2 internally lies in the

(a) I quadrant (b) II quadrant (c) III quadrant (d) IV quadrant

11. The ratio in which x-axis divides the line segment joining $A(2,-3)$ and $B(5,6)$ is

(a) 3: 5 (b) 1: 2 (c) 2: 1 (d) 2: 3

12. If the point $C(x,3)$ divides the line joining points $A(2,6)$ and $B(5,2)$ in the ratio 2: 1 then the value of x is

(a) 4 (b) 8 (c) 6 (d) 3

13. The mid point of the line segment joining the points $(-5,7)$ and $(-1,3)$ is

(a) $(-3,7)$ (b) $(-3,5)$ (c) $(-1,5)$ (d) $(5,-3)$

14. The distance of the point $P(3,4)$ from the origin is

(a) 7 units (b) 5 units (c) 4 units (d) 3 units

15. If $P(9a-2,-b)$ divides line segment joining $A(3a+1,-3)$ and $B(8a,5)$ in the ratio 3: 1, then the values of a and b is

(a) $a=-1,b=3$ (b) $a=-1,b=-3$ (c) $a=0,b=0$ (d) $a=1,b=-3$

16. If the points $A(6,1),B(8,2),C(9,4)$ and $D(p,3)$ are the vertices of a parallelogram, taken in order, then the value of p is

(a) 5 (b) 6 (c) 8 (d) 7

17. A point G divides a line segment in the ratio 3:7. The segment starts at the origin and ends at a point K having 20 as its abscissa and 40 as its ordinate. Given that G is closer to the origin than to point K, Which of the following are the coordinates of point G ?

(a) $(6,12)$ (b) $(12,6)$ (c) $(14,28)$ (d) (28, 14)

18. Point $P\left(\frac{a}{8},4\right)$ is the mid-point of the line segment joining the points $A(-5,2)$ and $B(4,6)$. The value of 'a' is

(a) -4 (b) 4 (c) -8 (d) -2

19. The distance between the points $(m,-n)$ and $(-m,n)$ is

(a) $\sqrt{m^2+n^2}$ (b) $m+n$ (c) $2\sqrt{m^2+n^2}$ (d) $\sqrt{2m^2+2n^2}$

20. If the points $A(4,3)$ and $B(x,5)$ are on the circle with centre $O(2,3)$, then the value of x is

(a) 0 (b) 1 (c) 2 (d) 3