1. Find the point (x, y) that divides the join of A(3, 6) and B(7, 10) in the ratio 3:1

A. (8, 9).
B. (4, 5)
C. (6, 9)
D. None of these

2. C is the mid-point of PQ. If P is (4, x), C is (y, -1) and Q is (-2, 4), then x and y respectively are ___________.

A. - 6 and 1
B. -6 and 2
C. 6 and -1
D. 6 and -2

3. Find the point that divides A(2, 4) and B(6, 8) in the ratio a : 1.

A. \( \left( \frac{6a-1}{a-1}, \frac{8a-4}{a-1} \right) \)
B. \( \left( \frac{6a-2}{a-1}, \frac{8a-4}{a-1} \right) \)
C. \( \left( \frac{6-2a}{a-1}, \frac{8+4a}{a-1} \right) \)
D. \( \left( \frac{6a+8}{a-1}, \frac{2a+4}{a-1} \right) \)
4. If the distance between the points \((4, p)\) and \((1, 0)\) is 5, then \(p=\)___

A. \(\pm 4\)
B. \(\pm 2\)
C. \(\pm 2\sqrt{2}\)
D. \(\pm 4\sqrt{2}\)

5. The distance between the points \((5, 5)\) and \((3, 3)\) is ____.

A. \(2 \text{ units}\)
B. \(2\sqrt{2} \text{ units}\)
C. \(\sqrt{2} \text{ units}\)
D. \(8\sqrt{2} \text{ units}\)

6. The distance of the point \((-2, -2)\) from the origin is _______ units.

A. \(\sqrt{9}\)
B. \(2\sqrt{2}\)
C. \(8\)
D. \(\sqrt{2}\)

7. P is the point on the y-axis which is equidistant from A\((-5, -2)\) and B\((3, 2)\), then \(PA = \) ____ cm.

A. \(2\)
B. \(6\)
C. \(3\)
D. \(5\)
8. The ratio in which the line segment PQ, where P (-5, 2) and Q (2, 3), is divided by the y-axis is
   A. 6 : 5
   B. 3 : 5
   C. 7 : 2
   D. 5 : 2

9. Determine the ratio in which the graph of the equation 3x + y = 9 divides line segment joining the points A (2,7) and B (1,3).
   A. $\frac{4}{3}$
   B. $\frac{2}{3}$
   C. $\frac{1}{3}$
   D. $\frac{3}{4}$

10. If Point P (-4,6) divides the line segment AB with A(-6,10) and B(x,y) in the ratio 3:2, find the co-ordinates of B.
    A. $\left(\frac{11}{3}, \frac{14}{3}\right)$
    B. $\left(\frac{8}{3}, -\frac{10}{3}\right)$
    C. $\left(-\frac{8}{3}, \frac{10}{3}\right)$
    D. $\left(-\frac{16}{3}, \frac{8}{3}\right)$
Practice Questions - Term I

11. The point on the x-axis which is equidistant from (2, -5) and (-2, 9) is
   A. (-2, 0)
   B. (2, 0)
   C. (-7, 0)
   D. (7, 0)

12. If A (-2, -1), B (a, 0), C (4, b) and D (1, 2) are the vertices of a parallelogram, find the values of a and b.
   A. a = 1 and b = 3
   B. a = 2 and b = 3
   C. a = 1 and b = 1
   D. a = 1 and b = 4

13. If the points A(1, 2), B(4, 3), C(1, 0) and D(p, -1) are the vertices of a parallelogram then, find the value of p.
   A. 3
   B. -2
   C. 4
   D. 0
14. In the given figure, P is the Midpoint of AB. Find the value of m.

A. - 10  
B. - 1  
C. - 6  
D. - 12

15. The distance between A (1, 3) and B (x, 7) is 5. The value of x if x > 0 is:

A. 4  
B. 2  
C. 1  
D. 3
16. In a classroom, 4 friends are seated at the points A, B, C and D as shown in the following figure. The point A(3, 4), B(6, 7), C(9, 4) and D(6, 1) taken in order form the vertices of ________________

A. Square  
B. Rectangle  
C. Rhombus  
D. Rhombus

17. From the figure, find the ratio in which the line segment joining the points A(3, 4) and C(9, 4) is divided by x = 5.

A. 1:1  
B. 2:1  
C. 1:2  
D. 3:1
18. From the figure, the distance between the points A(3, 4) and C(9, 4) is

A. 3
B. 4
C. 5
D. 6

19. Mid-point of the line-segment joining the points A(3, 4) and C(9, 4) is:

A. (3, 6)
B. (4, 3)
C. (6, 4)
D. (4, 6)

20. From the figure, find the ratio in which the line segment joining the points B(6, 7) and D(6, 1) is divided by y = 4.

A. 1:1
B. 1:2
C. 2:1
D. 3:2