



1.

If $P(5, y)$ is the mid-point of the line segment AB joining the points $A(3, 5)$ and $B(x, 3)$, then $(x + y)$ equals

- (A) 11
- (B) 3
- (C) 7
- (D) 4

2.

Find the ratio in which the point $Q(-3, p)$ divides the line segment AB joining the points $A(-5, -4)$ and $B(-2, 3)$. Also, find the value of p .

3.

Find the lengths of the medians RS and PT of a triangle PQR whose vertices are $P(6, -2)$, $Q(6, 3)$ and $R(3, 1)$.

4.

Find the area of ΔABC with vertices $A(0, -1)$, $B(2, 1)$ and $C(0, 3)$. Also find the area of the triangle formed by joining their mid-points. Show that the ratio of the areas of the two triangles is $4 : 1$.

5.

If $R(4, 5)$ is the mid-point of the line segment PQ joining the points $P(5, 6)$ and $Q(x, 4)$, then x equals

- (A) 4
- (B) 3
- (C) 5
- (D) 6

6.

Find the ratio in which the point $Q(-3, p)$ divides the line segment AB joining the points $A(-5, -4)$ and $B(-2, 3)$. Also, find the value of p .

7.

Find the ratio in which the line segment AB joining the points A(-3, 10) and B(x, -8) is divided by the point P(-1, 6). Also find the value of x.

8.

Find the area of ΔABC with vertices A(0, -1), B(2, 1) and C(0, 3). Also find the area of the triangle formed by joining their mid-points. Show that the ratio of the areas of the two triangles is 4 : 1.

9.

Find the lengths of the medians AD and BE of ΔABC whose vertices are A(7, -3), B(5, 3) and C(3, -1).

10.

Points P, Q, R and S divide the line segment joining the points A(1, 2) and B(6, 7) in 5 equal parts. Find the coordinates of the points P, Q and R.

11.

Find the value(s) of p for which the points $(3p + 1, p)$, $(p + 2, p - 5)$ and $(p + 1, -p)$ are collinear.

12.

The mid-point P of the line segment joining the points A(-10, 4) and B(-2, 0) lies on the line segment joining the points C(-9, -4) and D(-4, y). Find the ratio in which P divides CD. Also find the value of y.