

Latex Assignment15

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Ex 11.12.4

1. Three vertices of a parallelogram $ABCD$ are $A(3, -1, 2)$, $B(1, -2, 4)$ and $C(-1, 1, 2)$. Find the coordinates of the fourth vertex.
2. Find the lengths of the medians of the triangle with vertices $A(0, 0, 6)$, $B(0, 4, 0)$ and $(6, 0, 0)$.
3. If the origin is the centroid of the triangle PQR with vertices $P(2a, 2, 6)$, $Q(-4, 3b, -10)$ and $R(8, 14, 2c)$, then find the values of a , b and c .
4. Find the coordinates of a point on y-axis which are at a distance of $5\sqrt{2}$ from the point $P(3, -2, 5)$.
5. A point R with x-coordinate 4 lies on the line segment joining the points $P(2, -3, 4)$ and $Q(0, 0, 10)$. Find the coordinates of the point R .
6. If A and B be the points $(3, 4, 5)$ and $(-1, 3, -7)$ respectively, find the equation of the set of the points P such that $PA^2 + PB^2 = K^2$ where K is a constant.