

Question#15549

Let M and N be two points given by their coordinates in a Cartesian rectangular coordinate system: M(1,0,-2); N(5,-3,6). Find the coordinates of such a point C that divides the segment MN in a ratio 2:3 counting from M. Is it important for the solution that the coordinate system is rectangular?

Solution:

$$x(C) = x(M) - \frac{2}{3}(x(M) - x(N))$$

$$y(C) = y(M) - \frac{2}{3}(y(M) - y(N))$$

$$z(C) = z(M) - \frac{2}{3}(z(M) - z(N))$$

Answer: $C(3.67, -2, 3.33)$

It is not important is the coordinate system rectangular or not (as for this solution).