Example: The points (-5, 6, 0), (0, -5, 6), (-5, 0, 6) lies in the XY-plane, YZ-plane and ZX-plane respectively.

• distance formula

Distance between two points $P(x_1, y_1, z_1)$ and $Q(x_2, y_2, z_2)$ is given by

$$PQ = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2 + (z_2 - z_1)^2}$$

Example: Find the point(s), lying on the *z*-axis, whose distance from point (2, -1, 3) is 3 units. **Solution:** Let the required point be (0, 0, z).

We know that the distance between two points (x_1, y_1, z_1) and (x_2, y_2, z_2) is given by $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1) + (z_2 - z_1)^2}$

