

Exercise 11

What restrictions must be made on x , y , and z so that the triple (x, y, z) will represent a point on the y axis? On the z axis? In the xz plane? In the yz plane?

Solution

For a point on the y -axis, $x = 0$ and $z = 0$: $(0, y, 0)$.

For a point on the z -axis, $x = 0$ and $y = 0$: $(0, 0, z)$.

For a point in the xz -plane, $y = 0$: $(x, 0, z)$.

For a point in the yz -plane, $x = 0$: $(0, y, z)$.