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Question 1: If a point lies on the z-axis, then find its x-coordinate and y-coordinate.

Solution:
If the point lies on the z axis then its x-coordinate and y-coordinate will be zero.

Question 2: If a point lies on yz-plane then what is its x-coordinate?
Solution:
If the point lies on yz-plane then x-coordinate will be zero.

Question 3: In which plane does the point (4, -3, 0) lie?

Solution:
Given: x, y, z coordinates of the point are 4, -3, 0.

As the distance of point along the z-axis is 0, the plane in which the point lies is the xy-plane.

Question 4: In which octant does each of the given points lie?
(i) (-4, -1, -6)
(ii) (2, 3, -4)
(iii) (-6, 5, -1)
(iv) (4, -3, -2)
(v) (-1, -6, 5)
(vi) (4, 6, 8)

Solution:
The position of a point in a octant is signified by the signs of the x, y, z coordinates.
Signs of x, y, z coordinates in all the octants are as follow:

Number	Sign of X	Sign of Y	Sign of Z
I	+	+	+
II	-	+	+
III	-	-	+
IV	+	-	+
V	+	+	-
VI	-	+	-
VII	-	-	-
VIII	+	-	-

Compare signs with given table and allocate octants to the points

(i) (-4, -1, -6) lies in octant VII

(ii) (2, 3, -4) lies in octant V

(iii) (-6, 5, -1) lies in octant VI

(iv) (4, -3, -2) lies in octant VIII

(v) (-1, -6, 5) lies in octant III

(vi) (4, 6, 8) lies in octant I