# RD Sharma Solutions Class 11 Maths Chapter 28 Ex 28.1

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(i)

All are positive, so octant is XOYZ

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(ii)

X is negative and rest are positive, so octant is X'OYZ

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(iii)

Y is negative and rest are positive, so octant is XOY'Z

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(iv)

Z is negative and rest are positive, so octant is XOYZ'

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(v)

X and Y are negative and Z is positive, so octant is X'OY'Z

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(vi)

All are negative, so octant is X'OY'Z'

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(vii)

Y and Z are negative, so octant is XOY'Z'

## Introduction to 3D Coordinate Geometry Ex 28.1 Q1(viii)

X and Z are negative, so octant is X'OYZ'

## Introduction to 3D Coordinate Geometry Ex 28.1 Q2(i)

YZ plane is x-axis, so sign of x will be changed. So answer is (2, 3, 4)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q2(ii)

XZ plane is y-axis, so sign of y will be changed. So answer is (-5, -4, -3)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q2(iii)

XY-plane is z-axis, so sign of Z will change. So answer is (5, 2, 7)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q2(iv)

XZ plane is y-axis, so sign of Y will change, So answer is (-5, 0, 3)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q2(v)

XY plane is Z-axis, so sign of Z will change So answer is (-4, 0, 0)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q3

Vertices of cube are

(1, 0, -1) (1, 0, 4) (1, -5, -1)

(1, -5, 4) (-4, 0, -1) (-4, -5, -4)

(-4, -5, -1) (4, 0, 4) (1, 0, 4)

## Introduction to 3D Coordinate Geometry Ex 28.1 Q4

3-(-2)=5, |0-5|=5, |-1-4|=5

5, 5, 5 are lengths of edges

## Introduction to 3D Coordinate Geometry Ex 28.1 Q5

5-3=2, 0-(-2)=2, 5-2=3

2, 2, 3 are lengths of edges



## Introduction to 3D Coordinate Geometry Ex 28.1 Q6

(-4, 3, 5)

x-axis: $\sqrt{9+25} = \sqrt{34}$

y-axis: $\sqrt{16+25} = \sqrt{41}$

z-axis= $\sqrt{9+16} = 5$

## Introduction to 3D Coordinate Geometry Ex 28.1 Q7

(-3, -2, -5) (-3, -2, 5) (3, -2, -5) (-3, 2, -5) (3, 2, 5)

(3, 2, -5) (-3, 2, 5)