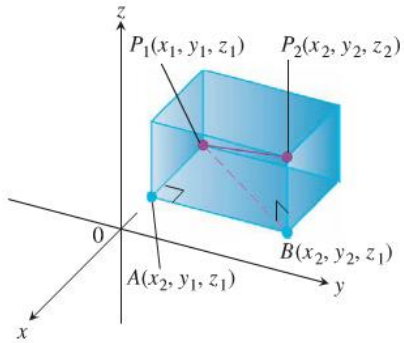


Chapter 12, Section 1

Cartesian coordinate system in space

Distance between two points



Equation for a sphere in space

Describe the set of points in space:

$$x = -1, z = 0$$

$$x^2 + y^2 + z^2 = 25, y = -4$$

$$x^2 + y^2 \leq 1, z = 0$$

$$x^2 + y^2 \leq 1, z = 3$$

$$x^2 + y^2 \leq 1$$

The plane through (3, -1, 2) perpendicular to:

x-axis

y-axis

Distance between origin and (0, 2, 0)

$$3x^2 + 3y^2 + 3z^2 + 2y - 2z = 9$$