if \((x_1, y_1, z_1)\) and \((x_2, y_2, z_2)\) are two points in \(\mathbb{R}^3\) sth \(x_1 \neq x_2, y_1 \neq y_2\) and \(z_1 \neq z_2\). Then the uniquely determines a box whose edges are parallel to the coordinate axis.
\[ x^2 + 4x + 3y^2 - 2y + \frac{3}{4}z^2 = 18 \]
$z = 8$ is a plane of height 8 parallel to the $x, y$ plane.
y^2 + z^2 \leq 1
$xy = 0$

This is the union of the $yz$ plane and the $xz$ plane.
Solid upper hemisphere with radius 2 centered at the origin.

\[ x^2 + y^2 + z^2 \leq 4, \quad z \geq 0 \]

\[ z \leq \sqrt{4 - (x^2 + y^2)}. \]
40.

\[ A = (-1, 5, 3), \quad B = (6, 2, -2) \]

we want \( P = (x, y, z) \)

5th

\[ |PA| = 2 |PB| \]

\[ \sqrt{(x-1)^2+(y-5)^2+(z-3)^2} = 2 \sqrt{(x-6)^2+(y-2)^2+(z+2)^2} \]

Simplify to get sphere?