

Name: *Solutions*

Quiz #1 - August 27, 2004

1. Show the equation represents a sphere and find its center and radius:

$$x^2 + y^2 + z^2 - 4x + 2y + 4z + 4 = 0.$$

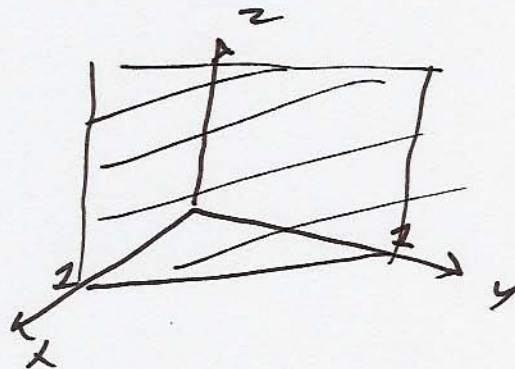
$$x^2 - 4x + 4 + y^2 + 2y + 1 + z^2 + 4z + 4 + 4 = 9$$

$$(x-2)^2 + (y+1)^2 + (z+2)^2 = 5$$

$$C = (2, -1, -2)$$
$$r = \sqrt{5}$$

2. Describe and sketch the surface in \mathbb{R}^3 represented by the equation $x + y = 1$.

It is a plane.



3. Use the vectors below to draw the vector $\vec{v} - 2\vec{u}$.

