Homework for Spheres

1. Find an equation of the sphere that satisfies the stated conditions

(1) Center at (1, 0, – 2); radius = 4

(2) Center at (–1, 3, 2); passing through the origin.

(3) A diameter has endpoints (–1, 2, 1) and (0, 2, 3).

2. Describe the surface whose equation is given

(1) $(x+1)^2+(y-3)^2+z^2-16=0$

(2) $x^2+y^2+z^2+10x+4y+2z-19=0$

3. Describe the relation between point P(2, 4 , 1) and sphere $x^2+y^2+z^2+2x-4y-6z=2$**.**

P is a point <u>on</u> / <u>outside</u> / <u>inside</u> the sphere