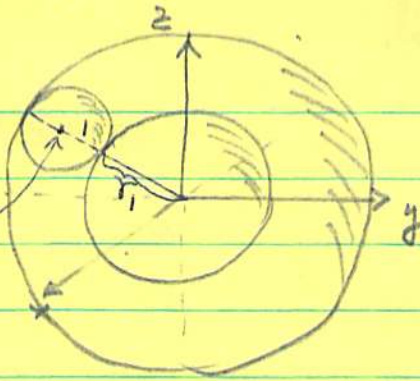


$$\frac{12.1}{12}$$

$$(3, -3, 4)$$



Let  $r_1$  be the radius of the smaller sphere.  
Then  $r_1 + 2$  is the radius of the larger sphere.

By dist. formula:

$$\begin{aligned}\sqrt{9+4+16} &= (r_1+1) \implies (r_1+1) = \sqrt{29} \\ \implies r_1 &= -1 + \sqrt{29}\end{aligned}$$

$$\therefore r_2 = 1 + \sqrt{29}$$

$\therefore$  The equation of the smaller sphere is:

$$x^2 + y^2 + z^2 = (\sqrt{29} - 1)^2 //$$

The equation of the larger sphere is:

$$x^2 + y^2 + z^2 = (\sqrt{29} + 1)^2 //$$