

$$\begin{cases} x = \rho \cos(\theta) \sin(\phi) & \rho \geq 0 \\ y = \rho \sin(\theta) \sin(\phi) & \theta \in [0, 2\pi] \\ z = \rho \cos(\phi) & \phi \in [0, \pi] \end{cases}$$

1. $\phi = \frac{\pi}{3} \Rightarrow$

$$\sin\left(\frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$$

$$\begin{cases} x = \rho \cos(\theta) \frac{\sqrt{3}}{2} & \rho \geq 0 \\ y = \rho \sin(\theta) \frac{\sqrt{3}}{2} & \theta \in [0, 2\pi] \\ z = \rho \cos(\phi) \end{cases}$$

un cono positivo con un angulo del eje z de 60°

2. $\rho = 3$

$$\begin{cases} x = 3 \cos(\theta) \frac{\sqrt{3}}{2} \\ y = 3 \sin(\theta) \frac{\sqrt{3}}{2} & \theta \in [0, 2\pi] \\ z = 3 \cos(\phi) & \phi \in [0, \pi] \end{cases}$$

una esfera de radio 3

3. $\rho = \sin(\theta) \sin(\phi)$

$$\begin{cases} x = \sin(\theta) \cos(\theta) \sin^2(\phi) \\ y = \sin^2(\theta) \sin^2(\phi) & \theta \in [0, 2\pi] \\ z = \sin(\theta) \sin(\phi) \cos(\phi) & \phi \in [0, \pi] \end{cases}$$