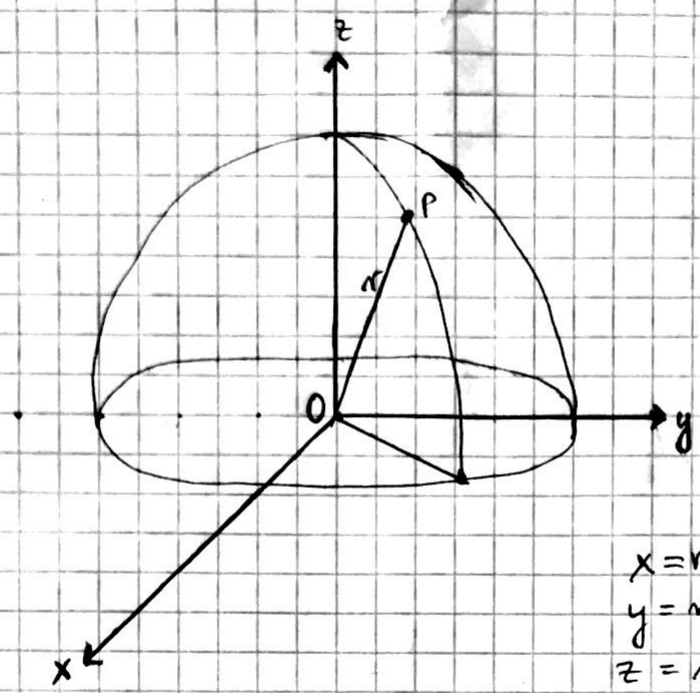
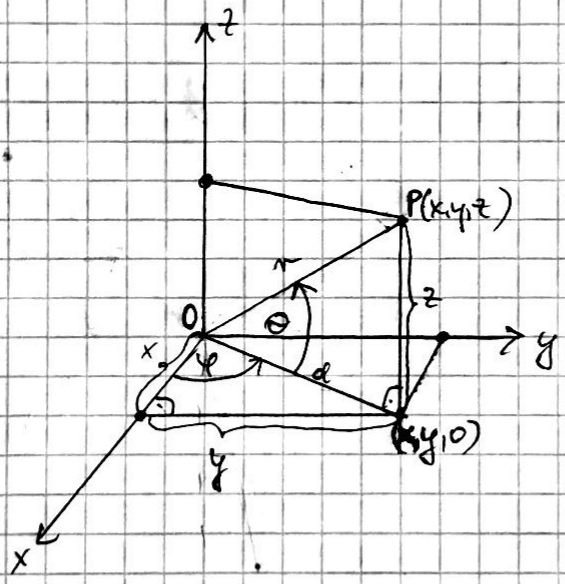


$$x = r\cos\varphi\cos\theta$$
$$y = r\sin\varphi\cos\theta$$
$$z = r\sin\theta$$

$$|J| = r^2\cos\theta$$



$$\sin\theta = \frac{z}{r}$$
$$\Downarrow$$
$$z = r\sin\theta$$

$$\cos\varphi = \frac{x}{d}$$
$$\cos\theta = \frac{d}{r}$$
$$\Rightarrow d = r\cos\theta$$
$$x = d\cdot\cos\varphi = r\cos\theta\cos\varphi$$

$$\sin\varphi = \frac{y}{d}$$
$$y = d\sin\varphi = r\cos\theta\sin\varphi$$

$$\varphi \in \langle 0, 2\pi \rangle$$
$$\theta \in \left\langle -\frac{\pi}{2}, \frac{\pi}{2} \right\rangle$$