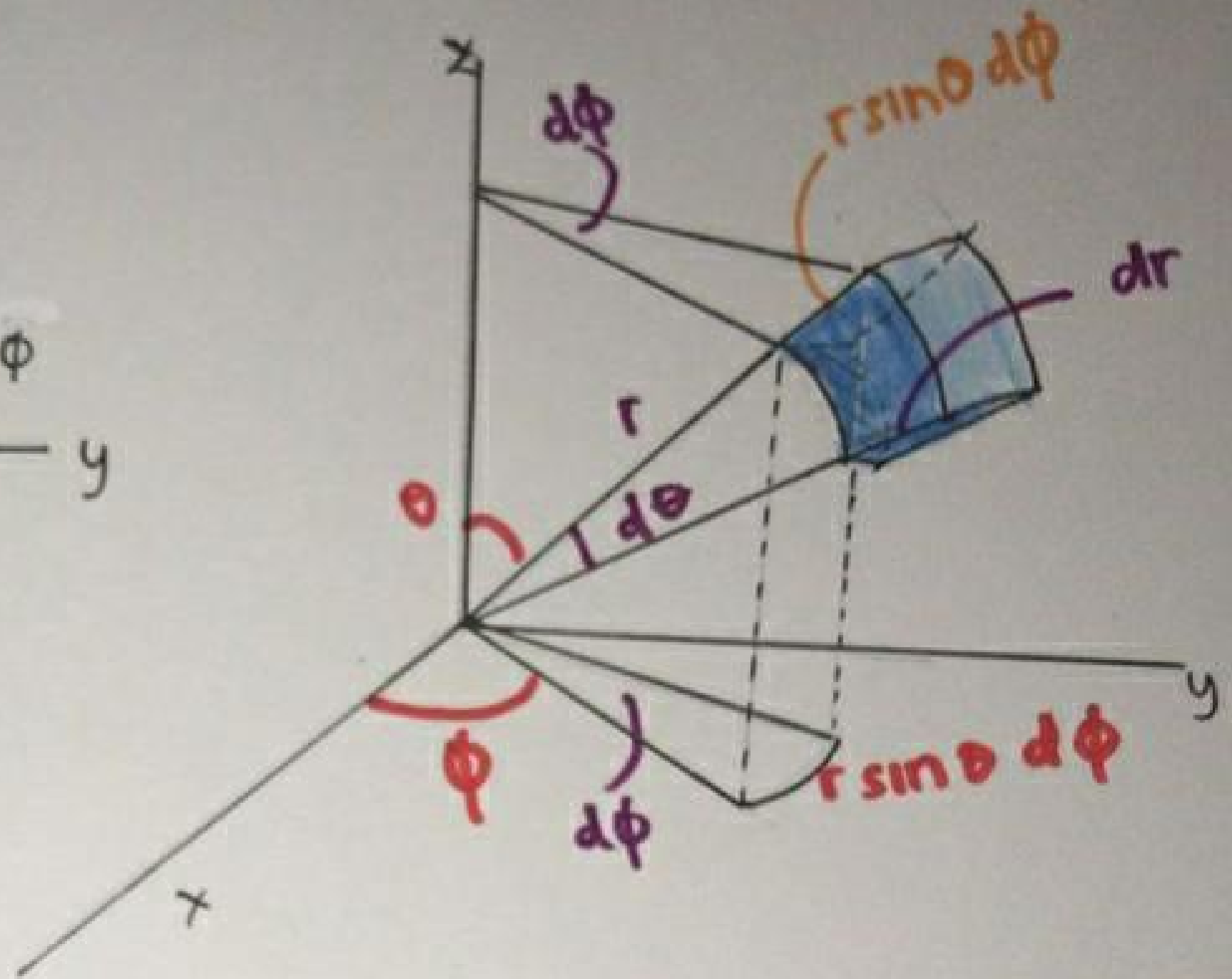
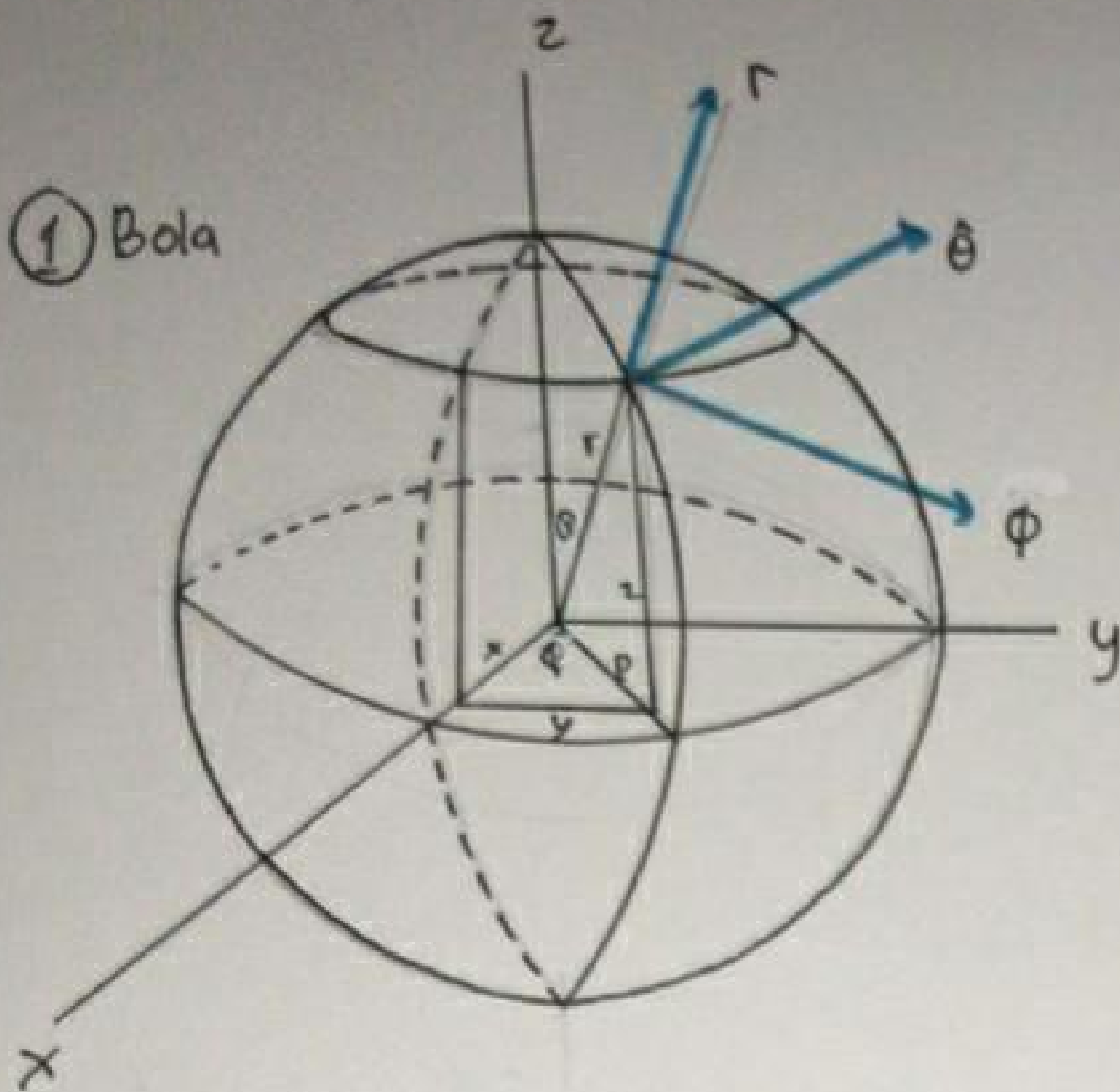
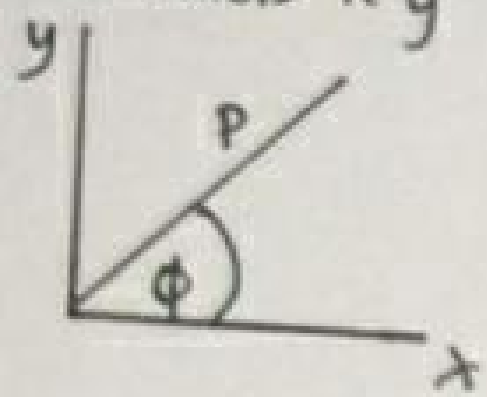


Nama = Fadiah Farah Kh
Npm = 2013022016



analisis xy



$$\sin \phi = \frac{y}{p}$$

$$y = p \sin \phi$$

$$x = p \cos \phi$$

$$\sin \theta \phi = \frac{x'}{p}$$

$$d\phi = \frac{x'}{\sin \theta}$$

$$x' = r \sin \theta d\phi$$

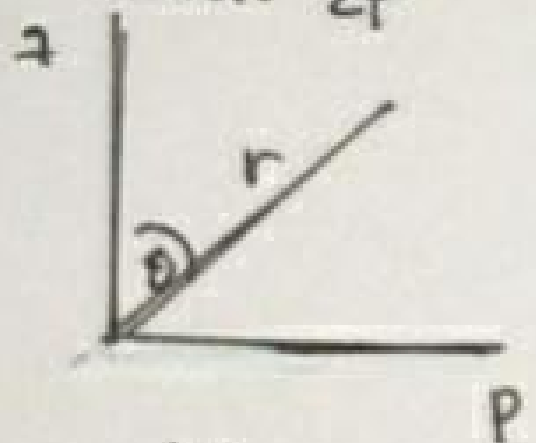
$$x = r \sin \theta \cos \phi$$

$$y = r \sin \theta \sin \phi$$

$$z = r \cos \theta$$

$$dV = r^2 \sin \theta dr d\theta d\phi$$

analisis zP



$$z = r \cos \theta$$

$$p = r \sin \theta$$

$$dV = p \times l \times t$$

$$dV = dr \cdot r d\theta \cdot r \sin \theta d\phi$$

$$dV = r^2 \sin \theta dr d\theta d\phi$$

$$dV = r^2 \sin \theta dr d\theta d\phi$$

$$dA = p \times l$$

$$dA = r d\theta \cdot r \sin \theta d\phi$$

$$dA = r^2 \sin \theta d\theta d\phi$$

$$dL^2 = dr^2 + r^2 d\theta^2 + r^2 \sin^2 \theta d\phi^2$$

$$\text{Gradiennya} = \nabla t = \hat{r} \frac{\partial t}{\partial r} + \hat{\theta} \left(\frac{1}{r} \frac{\partial t}{\partial \theta} \right) + \hat{\phi} \left(\frac{1}{r \sin \theta} \frac{\partial t}{\partial \phi} \right)$$

$$\text{divergensinya} = \nabla \cdot \vec{v} = \frac{1}{r^2} \left(\frac{\partial}{\partial r} r^2 v_r \right) + \frac{1}{r \sin \theta} \frac{\partial}{\partial \theta} (v_\theta \sin \theta) + \frac{1}{r \sin \theta} \frac{\partial v_\phi}{\partial \phi}$$