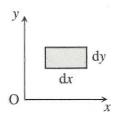
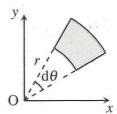
1) Calculs d'intégrales multiples

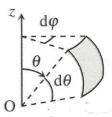
a) Élément de surface



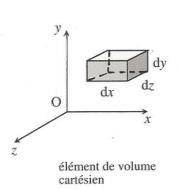


$$\frac{d\theta}{dz}$$

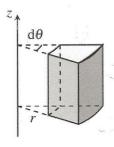
$$\frac{dz}{r}$$



b) Élément de volume

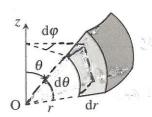


dV = dxdydz



élément de volume cylindrique

 $dV = r dr d\theta dz$



élément de volume sphérique

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