

Chapitre 11

Application 1

$$1) z(t) = v_0 t$$

$$x(t) = \frac{v_0 t^2}{2}$$

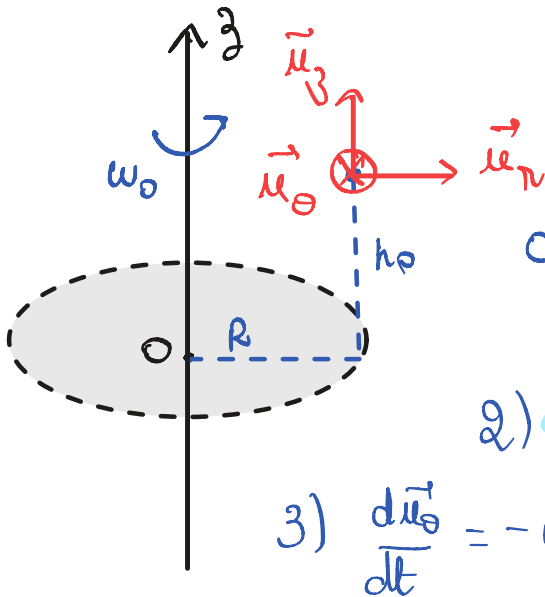
$$2) \vec{v} = \frac{2v_0}{2} t \vec{u}_x + v_0 \vec{u}_z$$

$$3) \vec{a} = \frac{2v_0}{2} \vec{u}_x$$

→ MRU selon Oz

↳ MRUV selon Ox

Application 2



$$1) x(t) = R$$

$$\theta(t) = \omega_0 t$$

$$(\text{H}) \theta(0) = 0$$

$$\text{OHNA} \rightarrow z(t) = h_0 + h_1 \cos(h \omega_0 t) \quad (\text{H}) \varphi = 0$$

$$2) \vec{v} = R \omega_0 \vec{u}_\theta - h \omega_0 h_1 \sin(\omega_0 t) \vec{u}_z$$

$$3) \frac{d\vec{u}_\theta}{dt} = -\omega_0 \vec{u}_r$$

$$\vec{a} = h \omega_0^2 h_1 \cos(\omega_0 t) \vec{u}_z - R \omega_0^2 \vec{u}_r$$