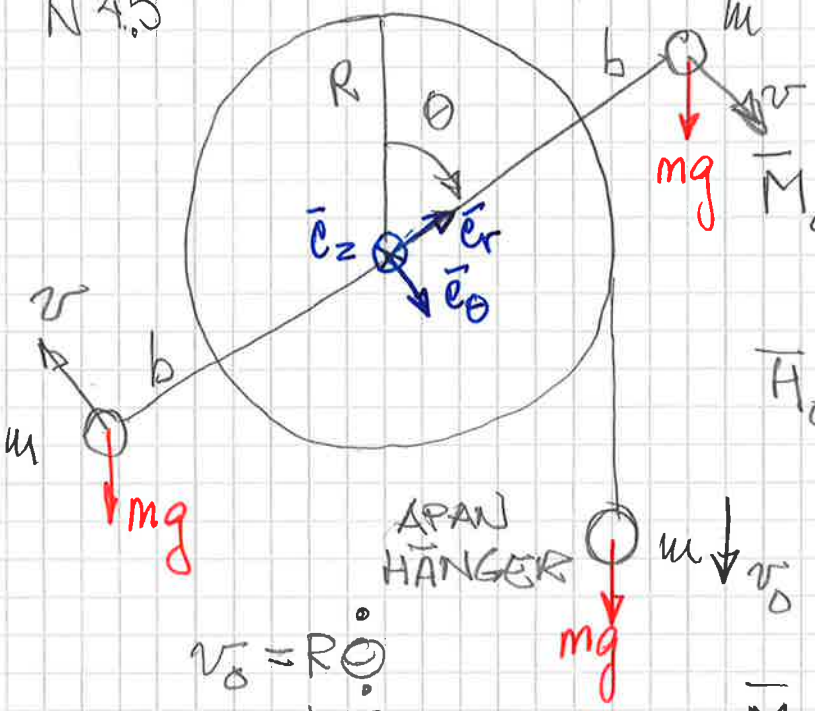
N 4.5



$v_0 = R\dot{\theta}$

$v = b\dot{\theta}$

$\bar{M}_0 = \dot{\bar{H}}_0$

$\bar{M}_0 = \sum \bar{r}_i \times \bar{F}_i = (mgR + mgb\sin\theta - mgb\sin\theta)\bar{e}_z = mgR\bar{e}_z$

$\bar{H}_0 = \sum \bar{r}_i \times m\bar{v}_i = \sum r_i \bar{e}_r \times m v_i \bar{e}_\theta)$

$= \sum r_i m v_i \bar{e}_r \times \bar{e}_\theta = \sum r_i m v_i \bar{e}_z$

$= (RmR\dot{\theta} + bmb\dot{\theta}\cdot 2)\bar{e}_z$

$= (mR^2 + 2mb^2)\dot{\theta}\bar{e}_z$

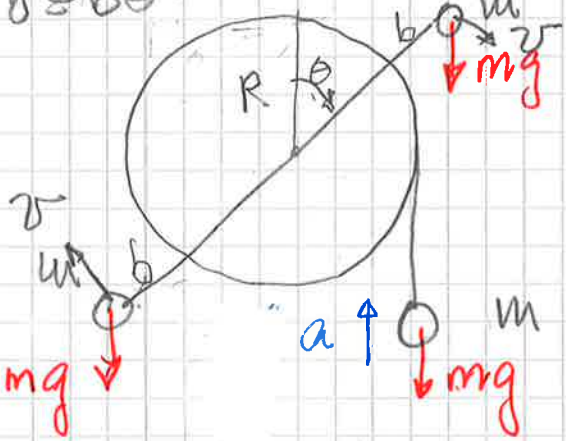
$\bar{M}_0 = \dot{\bar{H}}_0 \quad M_{0z} = \dot{H}_{0z}$

$mgR = mR^2 + 2mb^2\ddot{\theta}$

$\ddot{\theta} = \frac{gR}{R^2 + 2b^2}$

APAN SPRINGER UPPÅT MED KONST ACC a.

$v = b\dot{\theta}$



$\bar{M}_0 = \sum \bar{r}_i \times \bar{F}_i = (mgR + mgb\sin\theta - mgb\sin\theta)\bar{e}_z = mgR\bar{e}_z$

SOM TIDIGARE

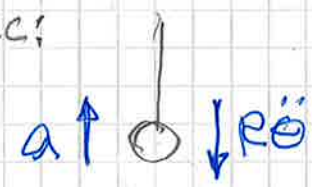
$\bar{H}_0 = \sum \bar{r}_i \times m\bar{v}_i = \sum r_i \bar{e}_r \times m v_i \bar{e}_\theta =$

$= \sum r_i m v_i \bar{e}_r \times \bar{e}_\theta =$

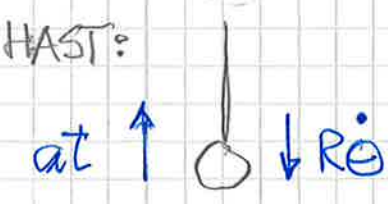
$= \sum r_i m v_i \bar{e}_z$

APAN:

ACC:



HAST:



$\bar{H}_0 = (Rm(R\dot{\theta} - at) + bmb\dot{\theta}\cdot 2)\bar{e}_z$

$\dot{\bar{H}}_0 = (\ddot{\theta}(mR^2 + 2mb^2) - mRa)\bar{e}_z$

$M_{0z} = \dot{H}_{0z}; \quad mgR = \ddot{\theta}(mR^2 + 2mb^2) - mRa$

$\ddot{\theta} = \frac{R(g+a)}{mR^2 + 2mb^2}$