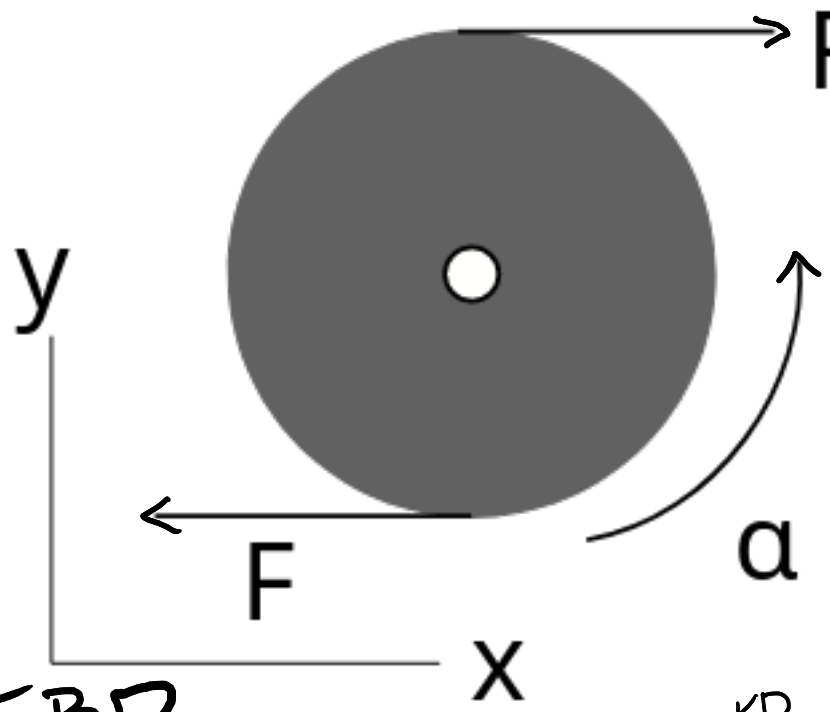
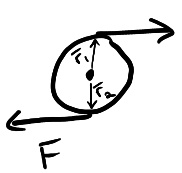


$I = \frac{mR^2}{2}$

FBD

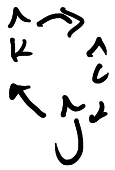
KD



$= \circlearrowright \; \Sigma I\alpha$

$\bar{r}_1 \times F\hat{\imath} + \bar{r}_2 \times -F\hat{\imath}$

$r\hat{\jmath} \times F\hat{\imath} - -r\hat{\jmath} \times -F\hat{\imath} = rF(-\hat{k}) + rF(-\hat{k})$



$\Sigma\tau = -2Fr = I\alpha$

$\iiint \bar{r} \times m\bar{v}\, dV$

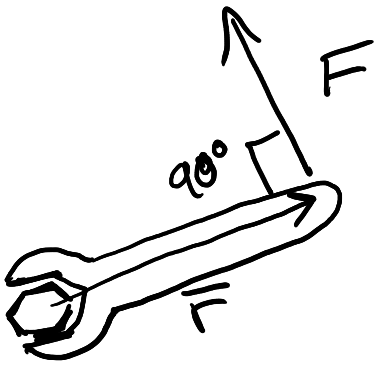
$\Sigma \bar{r} \times \bar{F} = \tau = \bar{r} \times m\bar{a}$

$\Sigma\tau = I\alpha$

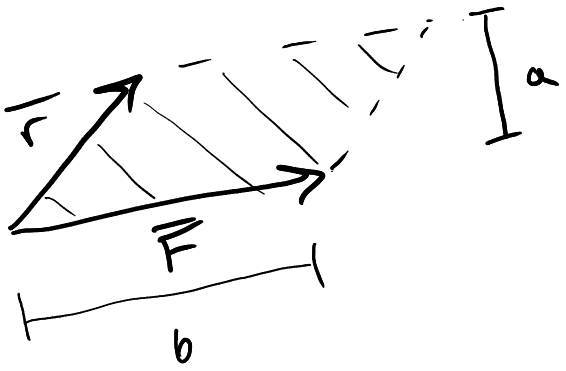
$-2Fr = \underbrace{0.5 \text{ kg-m}^2}_{I} \cdot \underbrace{\left(-50 \frac{\text{rad}}{s^2}\right)}_{\alpha}$

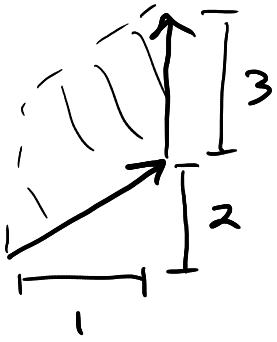
$F = \frac{I\alpha}{2r}$

Quick Moment moment



$\bar{r} \times \bar{F}$



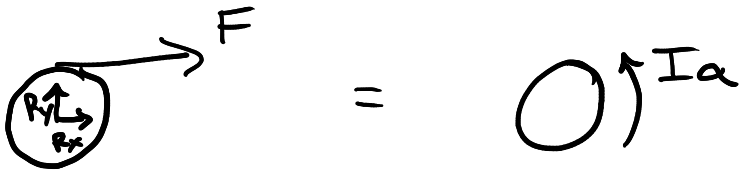


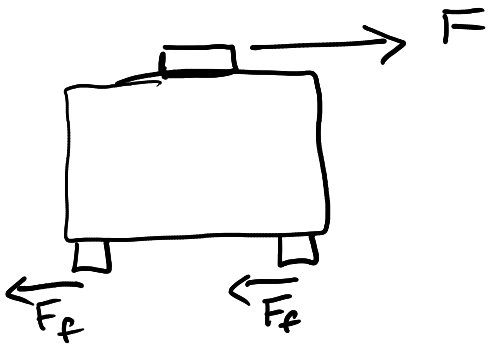
$\bar{r} = 1\hat{i} + 2\hat{j}$

$\bar{F} = 3\hat{j}$

$(1\hat{i} + 2\hat{j}) \times (3\hat{j})$

$= 3 \cdot 1\,\hat{k} + 0 = 3\ N \cdot m$


F
Ry
Rx
=
Ia


F
Ff
Ff