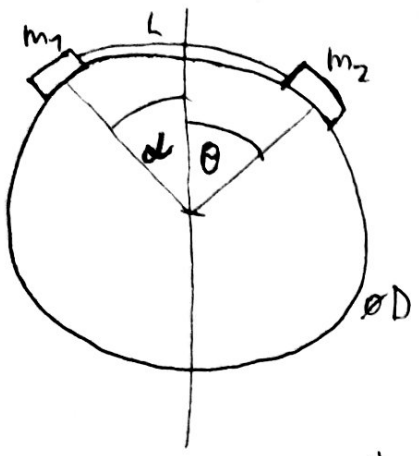
Příklad 6

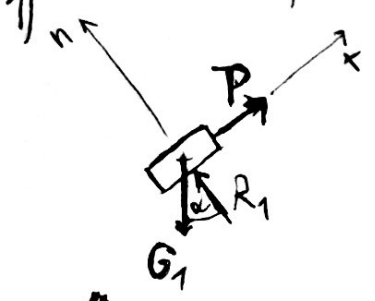
$m_1 = 200\ kg$, $m_2 = 150\ kg$, $D = 0{,}8\ m$, $L = 0{,}628$



$$L = R(\alpha + \theta)$$

$$(\alpha + \theta) = \frac{L}{R} = \frac{2L}{D} = 1{,}57\ rad = 89{,}95^\circ \approx 90^\circ = \frac{\pi}{2}$$

$$\alpha = \frac{\pi}{2} - \theta$$

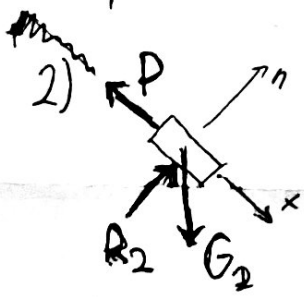


1) $t: P - G_1 \sin\alpha = 0$

$n: R_1 - G_1 \cos\alpha = 0$

$P - G_1 \sin\left(\frac{\pi}{2} - \theta\right) = 0 \quad (1)$

$R_1 - G_1 \cos\left(\frac{\pi}{2} - \theta\right) = 0 \quad (2)$



2) $t: +P - G_2 \sin\theta = 0 \quad (3)$

$n: R_2 + G_2 \cos\theta = 0 \quad (4)$

z (1) $P = G_1 \sin\left(\frac{\pi}{2} - \theta\right)$

(3) $-G_1 \sin\left(\frac{\pi}{2} - \theta\right) + G_2 \sin\theta = 0$

$\sin\left(\frac{\pi}{2} - \theta\right) = \cos\theta$ →

$-G_1 \cos\theta + G_2 \sin\theta = 0$

$G_1 \cos\theta = G_2 \sin\theta$

$$tg\,\theta = \frac{\sin\theta}{\cos\theta} = \frac{G_1}{G_2}$$

$$\theta = \operatorname{arctg}\left(\frac{G_1}{G_2}\right) = \operatorname{arctg}\left(\frac{200 \cdot 9{,}81}{150 \cdot 9{,}81}\right) = 0{,}927\ rad =$$

$$= 53{,}1^\circ$$