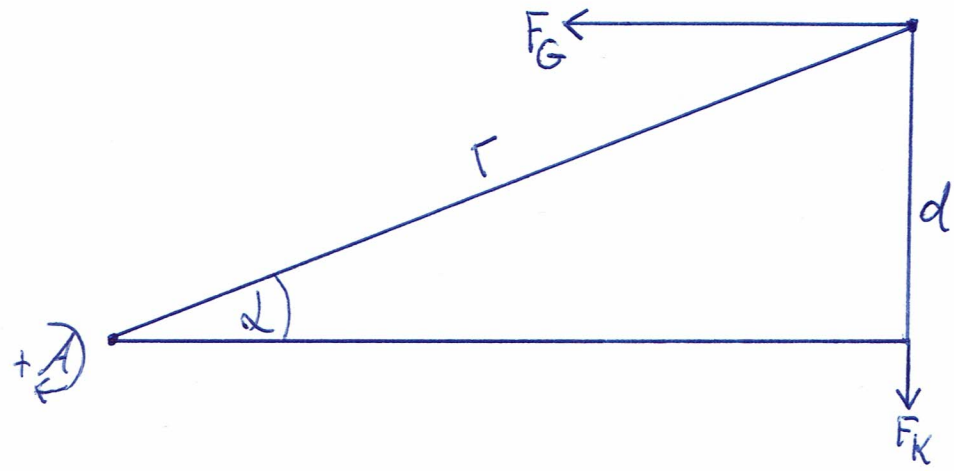

$M_K = F_K \cdot r \cdot \cos\alpha$ $\quad$ $M_G = -F_G \cdot r \cdot \sin\alpha$

$M_G + M_K = 0$ $\quad$ $F_K = \frac{mg}{2}$ $\quad$ $F_G = mg$

$-mgr\sin\alpha + \frac{1}{2}mgr\cos\alpha = 0 \quad | : mgr \cdot \sin\alpha$

$\frac{1}{2}\cos\alpha = \sin\alpha \quad | : \cos\alpha$

$\tan\alpha = \frac{1}{2} \approx 26{,}57°$