

[mex102] **Time of slide and time of flight**

Consider the problem already encountered in [mex1]. The particle starts to slide from rest at  $\theta = 0$ .

(a) Find the time it takes the particle to slide from angular position  $\theta_0 > 0$  to angular position  $\theta_c$ , where it takes off.

(b) Find (for  $R = 10\text{m}$  and  $g \simeq 10\text{m/s}^2$ ) the time between take-off from the sphere and landing on the plane.

