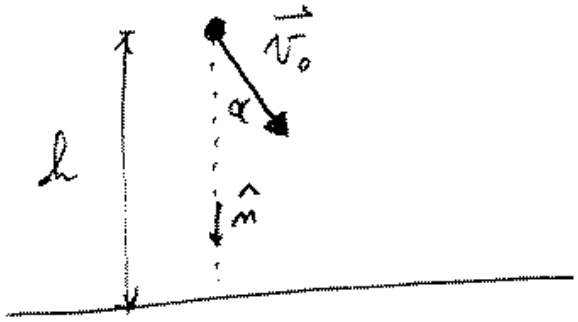
Esercizio 7

$h = 11\ m$

$v_0 = 10\ m/s$

$g = 9.81\ m/s$



$\alpha = 30°$

$\vec{a} = g \cdot \hat{n} \Rightarrow a_n = ?$ $\quad a_t = \vec{a} \cdot \frac{\vec{v}_0}{|v_0|} = g \cdot 1 \cdot \cos\alpha$

$$a_t = \frac{\sqrt{3}}{2} g$$

$$a_t^2 + a_n^2 = |\vec{a}|^2 = g^2 \qquad a_n^2 = g^2 - \frac{3}{4} g^2 = \frac{g^2}{4}$$

$$a_n = \frac{g}{2} = \frac{v_0^2}{R} \Rightarrow \boxed{R = \frac{2 v_0^2}{g} = 20.38\ m}$$