$\vec{v}_0$

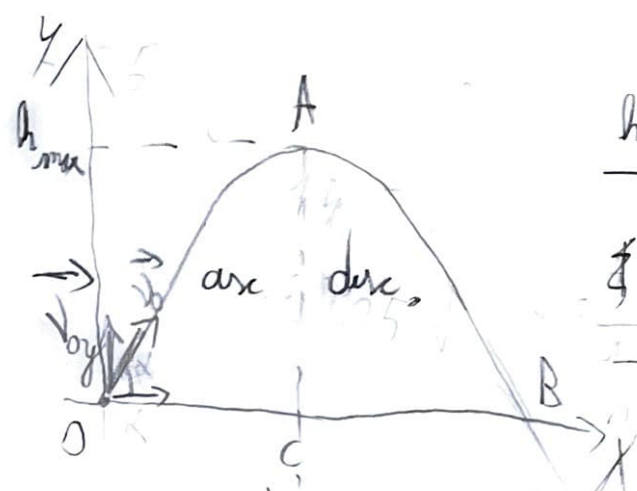$\angle \alpha =$

Timpul de urcare $(t_u) = T$ $0 \to A$

$$t_u = \frac{v_0 \sin \alpha}{g} \Rightarrow t_c = \frac{v_0 \sin \alpha}{g}$$

$$\underline{h_{max} = \frac{v_0^2 \sin^2 \alpha}{2g}}$$

$$b = \frac{v_0^2 \sin 2\alpha}{g}$$

$Ox: x(t) = v_{0x} t = v_0 \cos \alpha \, t$

$Oy: y(t) = v_{0y} t - \frac{gt^2}{2} = v_0 \sin \alpha \, t - \frac{gt^2}{2}$

$\underline{y = f(x)}$

$x(t) = v_0 \cos \alpha \, t \Rightarrow t = \frac{x}{v_0 \cos \alpha}$

* Vectorul viteza într-un punct este tangent la traiectorie în acel punct.

$y(t) = v_0 \sin \alpha \, t - \frac{gt^2}{2}$

$\Rightarrow y = v_0 \sin \alpha \frac{x}{v_0 \cos \alpha} - \frac{g}{2} \frac{x^2}{v_0^2 \cos^2 \alpha} \Leftrightarrow$

$\Leftrightarrow y = x \, tg \, \alpha - \frac{g}{2} \frac{x^2}{v_0^2 \cos^2 \alpha}$

$\boxed{v_y(t) = v_{0y} - gt}$