JUAN URSUL SOLANES

IME (INDUSTRIAL) 1968-1972 (1973)

M A. (organización) 2004-2006 (2016)

Den A. — 2016

P.C. Dpto. Ing. Ind. (48 años)

Cubículo 504 (CIA)

---

https://ursularias.com

TAREAS (máx - 10) ___ 30%

SERIES. _____ 30%.

EXÁMENES PARCIALES ___ 40%.

PROMEDIO SEM. 100%

Si PROM ES APROB +.

PASAR TODOS LOS E. PARC. ⇒ EXENTO

P.S. 50%

EF 50%

CAL. FINAL 100%

$$F(\quad) = 0$$

var. indep.

función incógnita

derivada

$$F(x) = 0$$

$$\rightarrow x^2 + 5x + 6 = 0$$

$$(x+2)(x+3) = 0$$

$$x_1 = -2 \quad | \quad x_2 = -3$$

Solución

$$F(x, y, y') = 0$$

$$\frac{dy}{dx} = 0 \qquad y(x) = ?$$

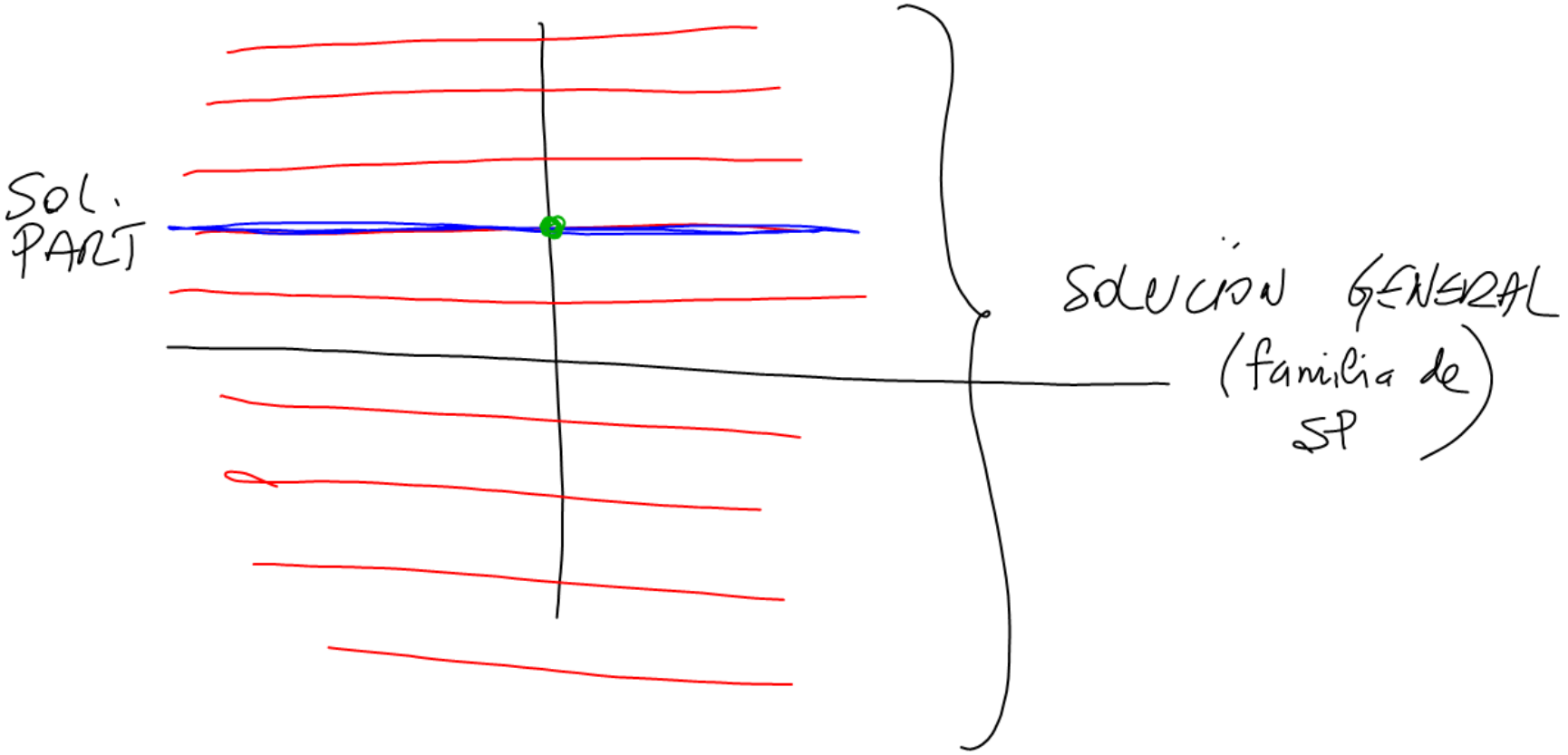
$$y(x) = C_1 \qquad C_1 \in \mathbb{R}$$

Solución.

$$y(0) = 2$$ ci

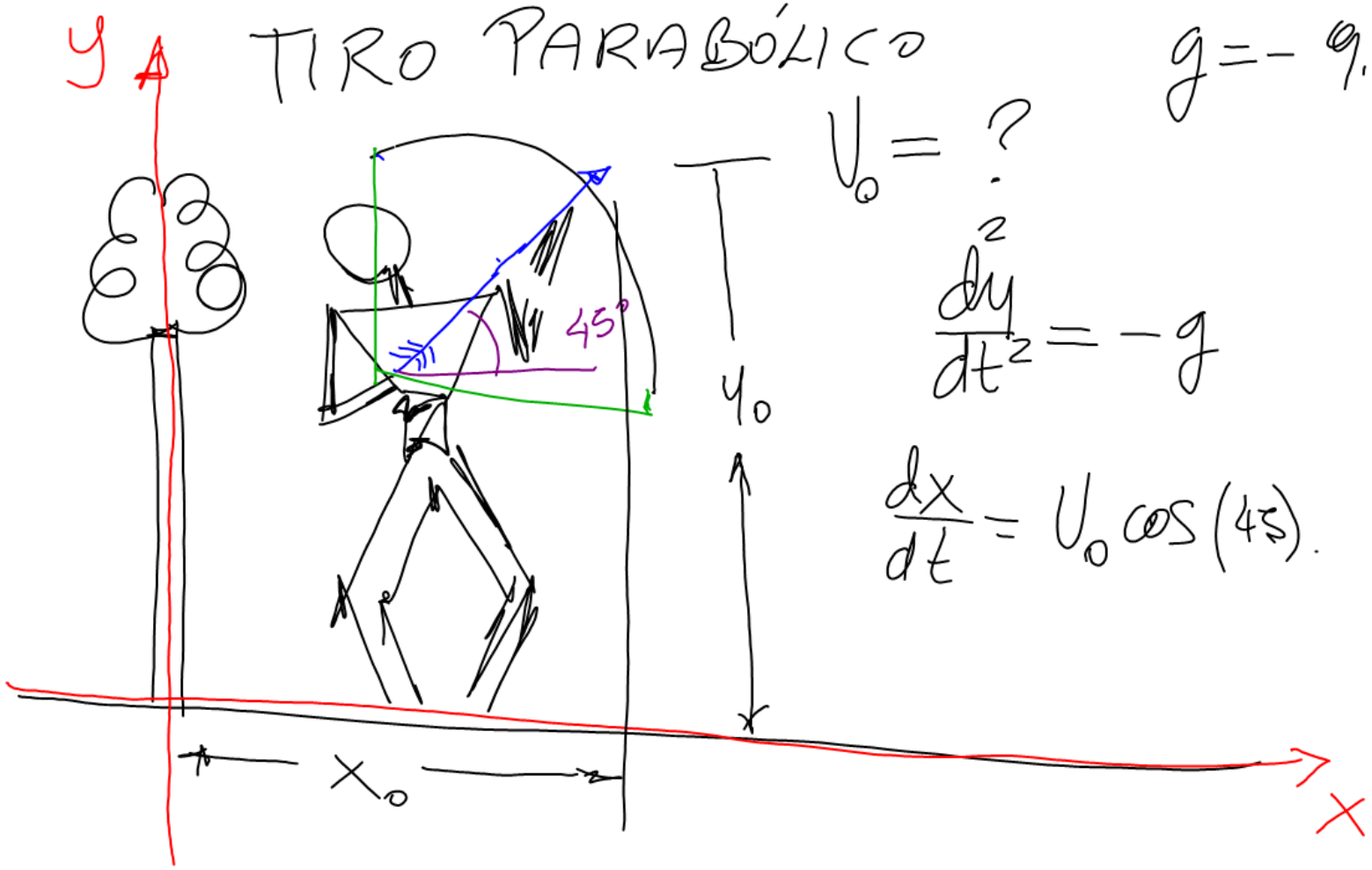
$$y(x) = 2$$

Sol. part.


Sol.
PART
SOLUCIÓN GENERAL
(familia de
SP)

TIRO PARABÓLICO

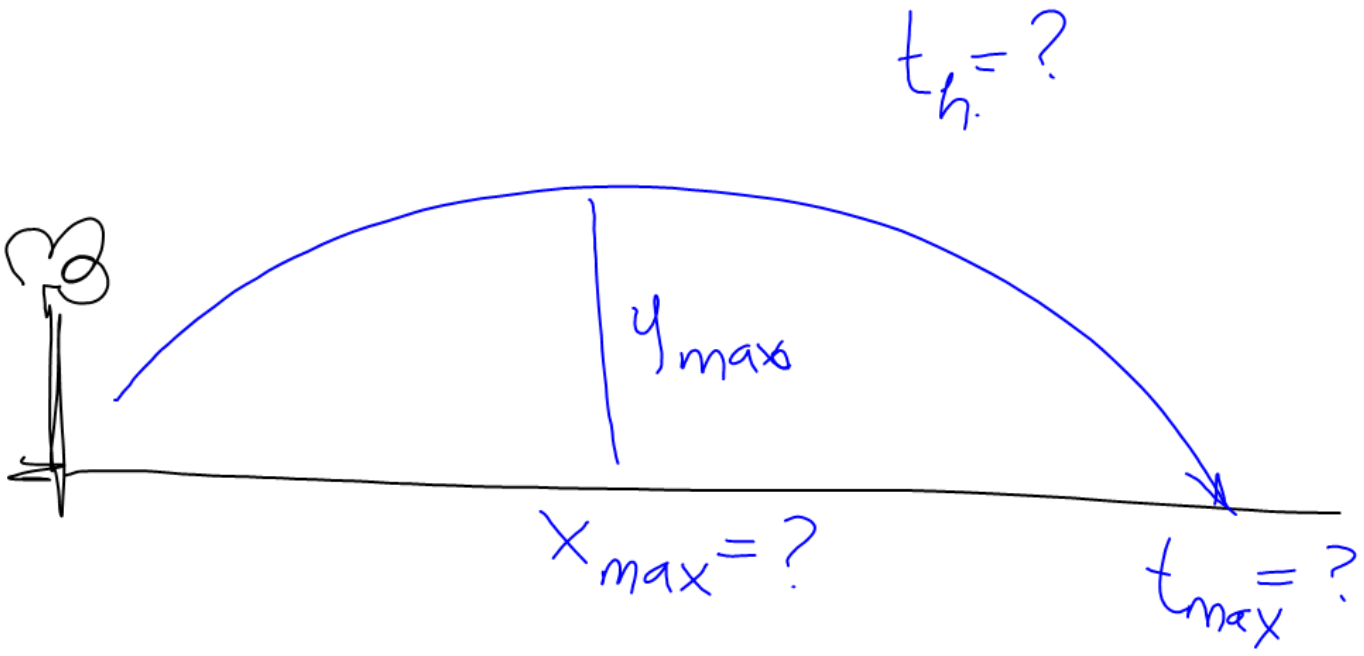
$g = -9.8066$

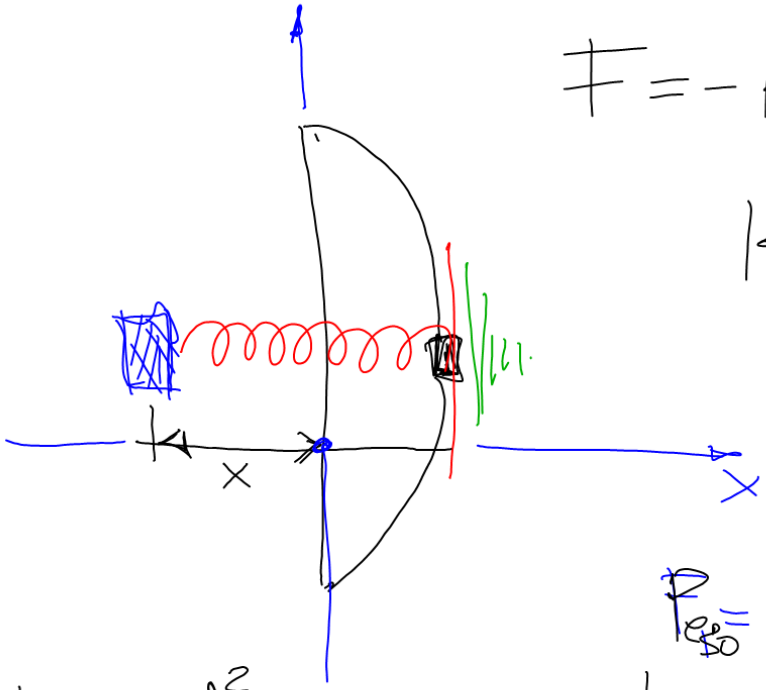


$V_0 = ?$

$$\frac{d^2y}{dt^2} = -g$$

$$\frac{dx}{dt} = V_0 \cos(45).$$


$t_h = ?$
y_{max}
$x_{max} = ?$
$t_{max} = ?$



$$F = -k \cdot x$$

$$k = \frac{13{,}48 \text{ kg}}{0{,}35 \text{ m}}$$

$$P_{esp} = 0{,}016$$

$$L_1 = 0{,}61 \text{ m}$$

$$0{,}22$$

$$L_{refer} = 0{,}39 \text{ m}.$$

$$F = m \frac{d^2x}{dt^2}$$

$$m = \frac{P}{g}$$

$$\frac{P}{g} \frac{d^2x}{dt} = -kx \Rightarrow \boxed{\frac{P}{g} \frac{d^2x}{dt} + kx = 0}$$

$$x = -0{,}39 \text{ m}$$

$$x_0' = 0$$