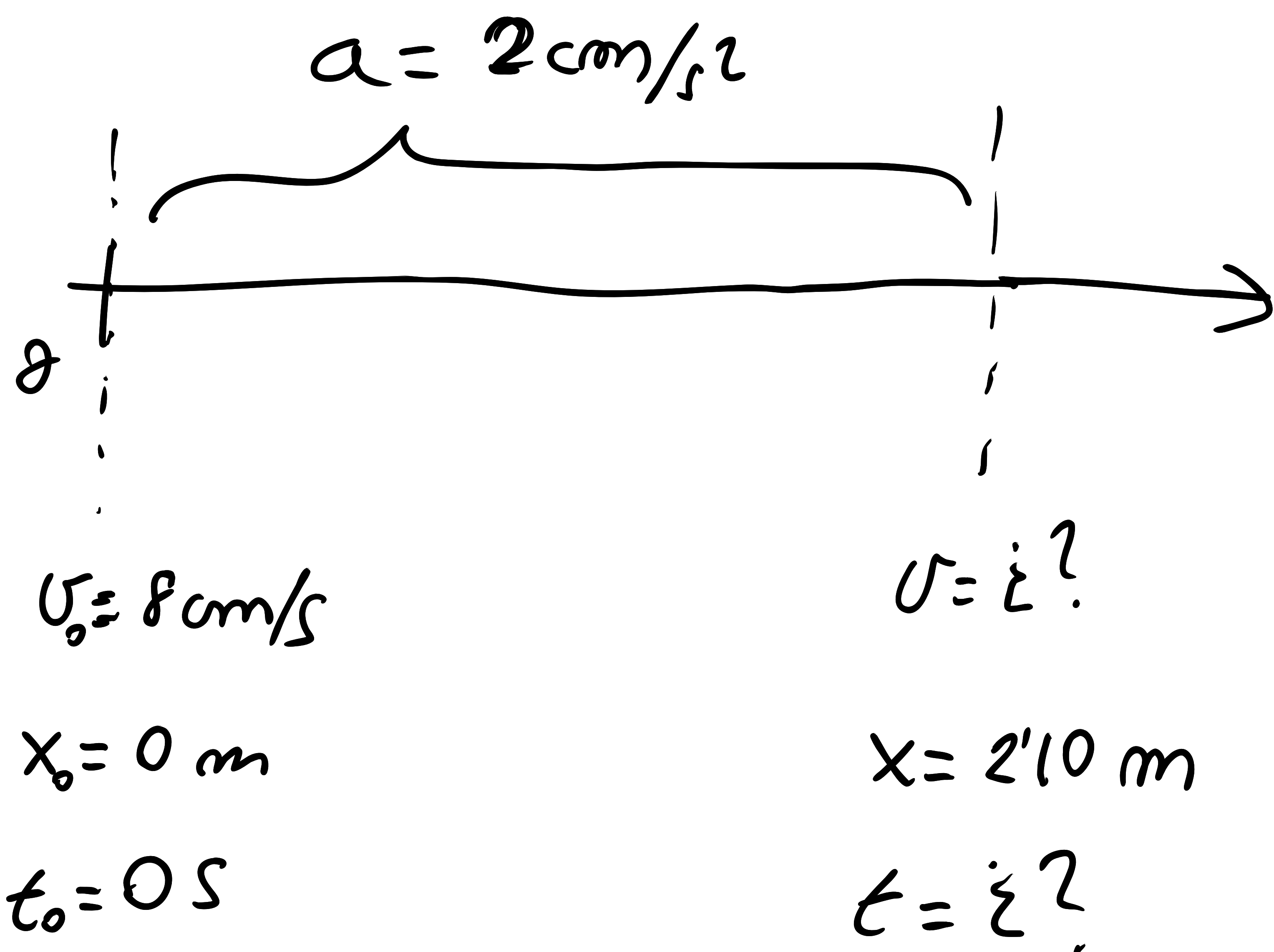


EJERCICIO 8° MRUA:



Pasamos todas las magnitudes a unidades del S.I.:

$$a = 2 \frac{\text{cm}}{\text{s}^2} \cdot \frac{1 \text{ m}}{100 \text{ cm}} = 0.02 \text{ m/s}^2$$

$$v = 8 \frac{\text{cm}}{\text{s}} \cdot \frac{1 \text{ m}}{100 \text{ cm}} = 0.08 \text{ m/s}$$

M.R.U.A. \Rightarrow

- (1) $v = v_0 + a t$
- (2) $x = x_0 + v_0 t + \frac{1}{2} a t^2$

$$(2.10 \text{ m}) = 0 + \left(0.08 \frac{\text{m}}{\text{s}}\right) \cdot t + \frac{1}{2} \cdot \left(0.02 \frac{\text{m}}{\text{s}^2}\right) \cdot t^2$$

$$(2.10 \text{ m}) = \left(0.08 \frac{\text{m}}{\text{s}}\right) t + \left(0.01 \frac{\text{m}}{\text{s}^2}\right) \cdot t^2$$

$$t = \frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$$

$$0.01 t^2 + 0.08 t - 2.10 = 0$$

ecuac. 2° grado

$$A x^2 + B x + C = 0$$

$$t = \frac{-0.08 \pm \sqrt{(0.08)^2 - 4 \cdot (0.01) \cdot (-2.10)}}{2 \cdot (0.01)} = \frac{-0.08 \pm \sqrt{0.0064 + 0.084}}{0.02}$$

$$-19.5 = \frac{-0.08 - 0.3}{0.02}$$

$$\frac{-0.08 + 0.3}{0.02} = 11.5$$