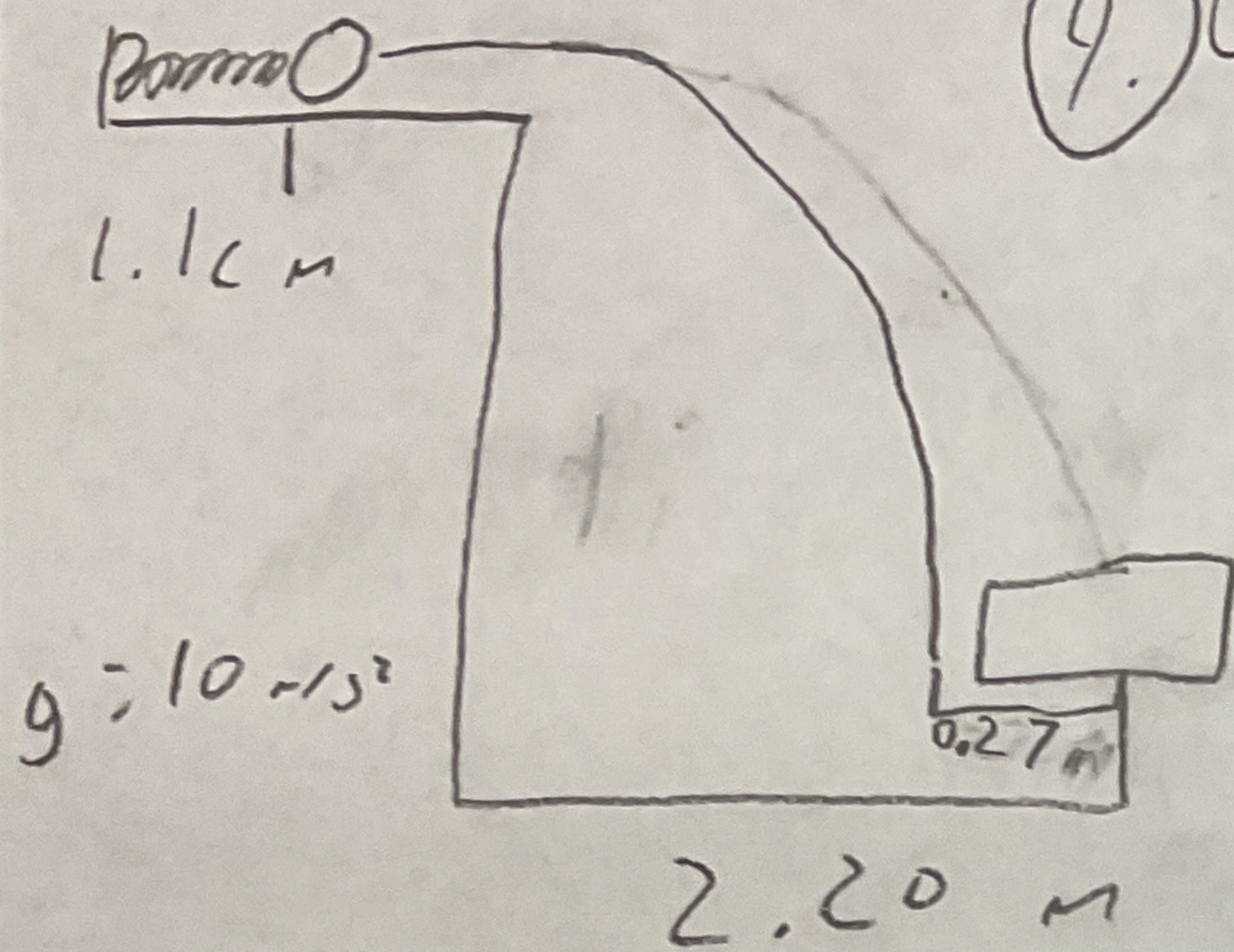


Christian Colón

$$(9) U = \frac{1}{2} k x^2 = \frac{1}{2} m v_i^2$$

3



$$U = \frac{1}{2} k x_i^2 = \frac{1}{2} m v_i^2$$

$$v_i = \sqrt{\frac{k x_i^2}{m}}$$

3

$$D_B = \left(\sqrt{\frac{k x_i^2}{m}} \right) + \frac{D_B}{\sqrt{\frac{k x_i^2}{m}}}$$

$$2.2 = \sqrt{\frac{k x_i^2}{m}} \frac{D_B}{\sqrt{\frac{k x_i^2}{m}}}$$

$$\frac{2.2}{\sqrt{\frac{k x_i^2}{m}}} = \frac{D_B}{\sqrt{\frac{k x_i^2}{m}}}$$

$$\frac{4.84}{\frac{k x_i^2}{m}} = \frac{D_B^2}{\frac{k x_i^2}{m}}$$

$$\frac{4.84 m}{x_i^2} = \frac{3.7249}{x_i^2}$$

$$\frac{4.84 m}{x_2^2} = \frac{3.7249}{3.7249}$$

$$\frac{4.84 m}{x_2^2} = 1$$

$$x_2^2 = 4.84$$

$$x_2 = 2.2 \text{ cm} \quad \star$$