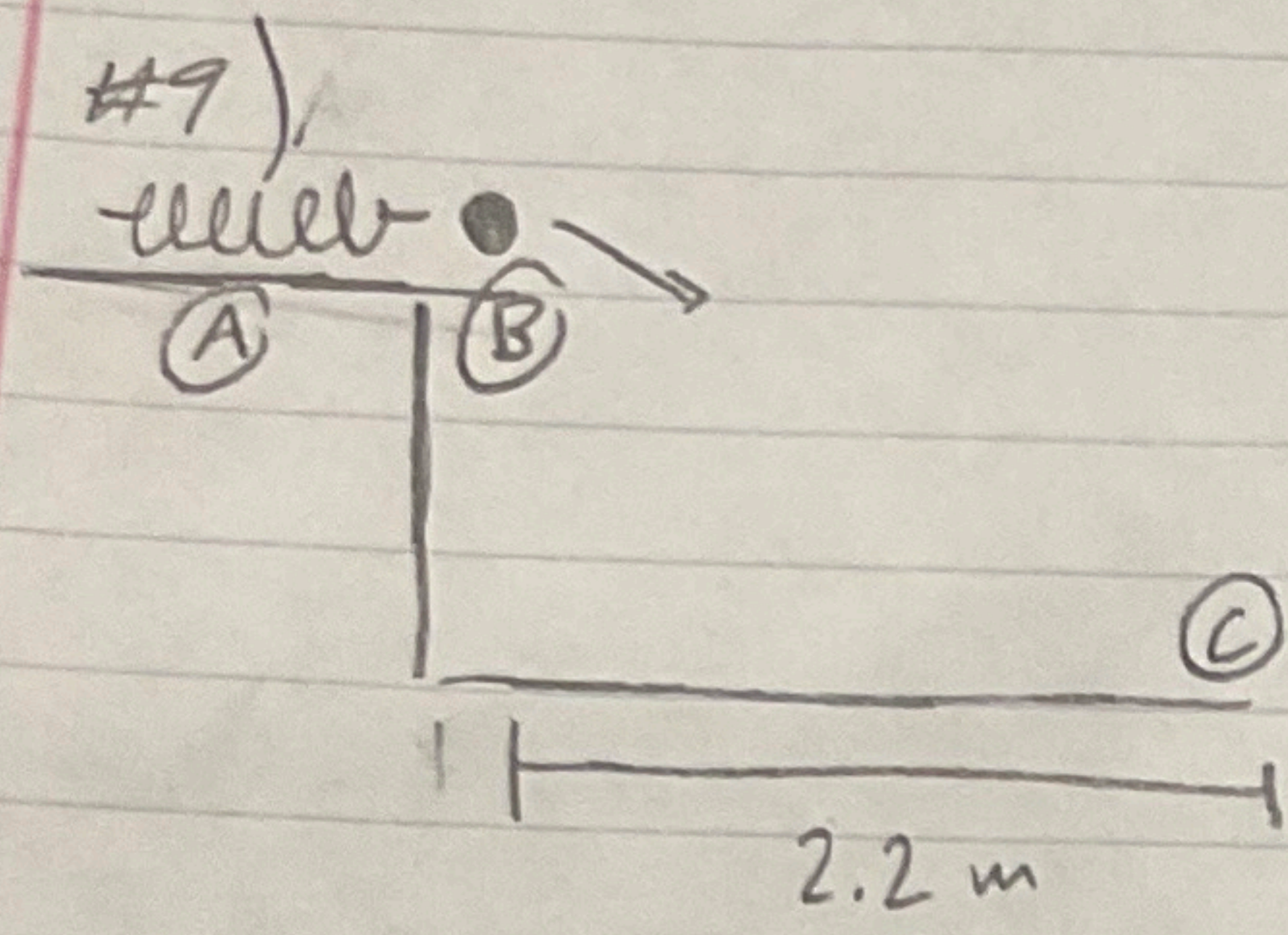


Cla Berry



$$U_s = \frac{1}{2} kx^2$$

$$U_s + \sum E_i = PE_i + \sum E_f + W$$

$$\frac{1}{2} kx^2 + mgh = \frac{1}{2} mv_f^2$$

$$V_i = \frac{d_1}{t}$$

$$V_i = \frac{d_2}{t}$$

time is the same

A → B

$$\frac{1}{2} kx^2 = \frac{1}{2} mv_i^2$$

$$\frac{d_1}{V_i} = \frac{d_2}{V_2} \rightarrow \frac{1.93}{\sqrt{\frac{kx_1^2}{m}}} = \frac{2.2}{\sqrt{\frac{kx_2^2}{m}}}$$

B → C

$$\frac{1}{2} mv_i^2 + mgh = \frac{1}{2} mv_f^2$$

$$V_i = 0$$

$$a_y = -9.8$$

$$V_i = ?$$

$$a_x = 0$$

$$d = 2.2 \text{ m}$$

$$V_{ix} = V_{fx}$$

Bobby

k = ?

$$x = 0.011 \text{ m}$$

$$d = 1.93 \text{ m}$$

$$\frac{1.93}{0.011} = \frac{2.2}{x_2}$$

$$\frac{1}{2} kx^2 + mgh = \frac{1}{2} mv_f^2$$

$$x_2 = \frac{2.2}{175.4545} = 0.01253$$

$$x_2 = 12.53 \text{ cm}$$