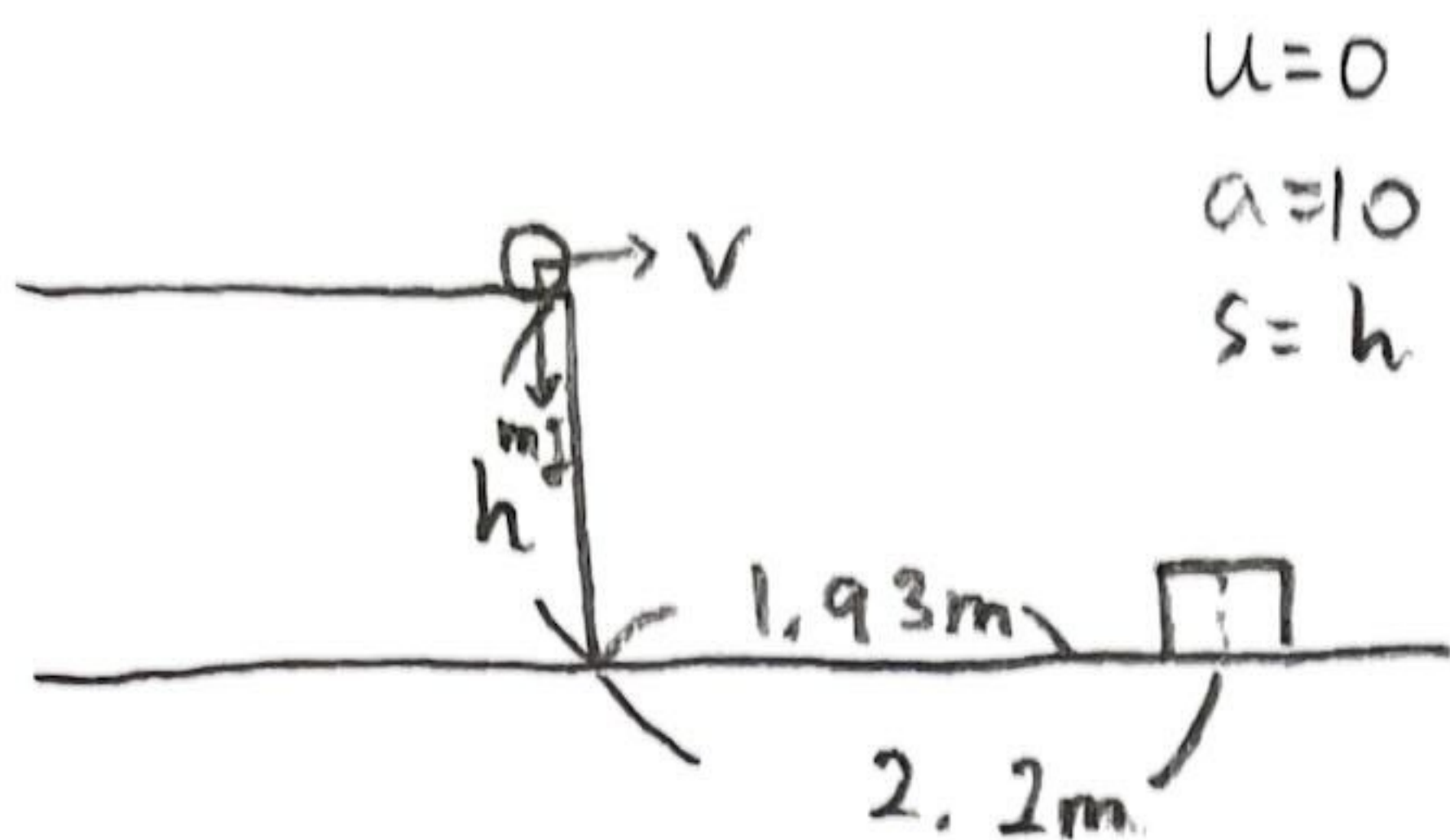


David Jo
#9.



$$F = -kx = ma.$$

$$x_1 = 0.011\text{m}, \quad h = \frac{1}{2}at^2$$
$$= 5t^2.$$

$$\frac{1.93}{v} = \sqrt{\frac{h}{5}} = t.$$

$$E = \frac{1}{2}kx^2 = \frac{1}{2}mv^2.$$

$$= \frac{1}{2}k(0.011)^2 = \frac{1}{2}mv^2$$

$$k(0.011)^2 = mv^2$$

$$\sqrt{\left(\frac{k}{m}\right)(0.011)^2} = v$$

$$t = \frac{1.93}{v}, \quad v_2 = 2.2\text{V}$$

$$0.011 \sqrt{\frac{k}{m}} = v.$$

$$V_2 = 2.2\text{V}$$

$$0.011 \times 2.2 = 0.0242$$

\therefore Rhoda should compress

$$0.0242\text{m} = (2.42\text{cm})$$