

P. According to the kinetic energy.

$$\frac{1}{2}kx^2 = \frac{1}{2}mv^2$$
$$t = \sqrt{\frac{2h}{g}} \text{ (which is a constant number)}$$

$$S = v \cdot t.$$

$$\therefore v = \sqrt{\frac{k}{m}} \cdot x$$

$$\therefore S = \sqrt{\frac{2hk}{m}} \cdot x$$

$\sqrt{\frac{2hk}{m}}$ can be seen as μ

$$\therefore S = \mu x$$

$$\mu = \frac{S}{x} = \frac{2.2 - 0.27}{0.011} \approx 175.45$$

$$\therefore x = \frac{S_{\text{full}}}{\mu} = \frac{2.2}{175.5} = 0.0125 \text{ m}$$

It's 1.2 cm.