Q9. Yi-You Chiu

$$\cancel{\frac{1}{2}}kx^2 = \cancel{\frac{1}{2}}mv^2$$

$$V = \sqrt{kx^2} = x\sqrt{k}$$

$$d = Vt$$

↳ $\begin{cases} d_1 = V_1 t \\ d_2 = V_2 t \end{cases}$

$$d_T : d_2 = V_1 \cancel{t} = V_2 \cancel{t}$$

$$2{,}12 - 0{,}127 = 2{,}12 = x_1\cancel{\sqrt{k}} : x_2\cancel{\sqrt{k}}$$

$$\downarrow$$

$$1:1$$

$$2{,}12 \times 1:1 = (2{,}12 - 0{,}127)x_2$$

$$x_2 = 1{,}254\ cm$$

(6