

Mubarak Nur

Q9.)

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

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

$$\frac{1}{2}$$

$$x = v_0 t$$

$$h = \frac{1}{2} g t^2$$

$$2.2 - 0.27 = \boxed{1.93}$$

$$\frac{v_2}{v_1} = \frac{x_2}{x_1}$$

$$x = \sqrt{2h/g}$$

$$x_2 = \frac{x}{x_1} \cdot x$$

$$x_2 = \frac{2.2}{1.93} \cdot 1.1$$

$$\boxed{x_2 = 1.25}$$