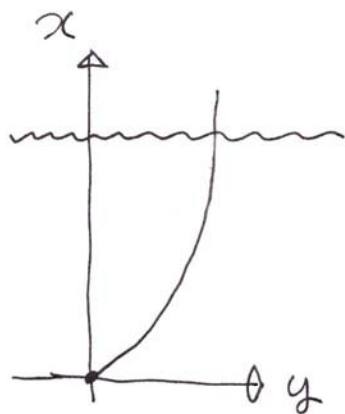


2016 기말고사 Prob. 3 해답.



$$\frac{d^2 y}{dx^2} = \frac{\omega}{T_0}$$

$$\frac{dy}{dx} = \frac{\omega}{T_0} x + C_1$$

$$y = \frac{\omega}{2T_0} x^2 + C_1 x + C_2$$

B.C. $y(x=0) = C_2 = 0$

$$\frac{dy}{dx}(x=h) = \frac{\omega}{T_0} h + C_1 = 0$$

$$\therefore C_1 = -\frac{\omega}{T_0} h$$

$$\therefore y = \frac{\omega}{2T_0} x^2 - \frac{\omega}{T_0} h x = \frac{\omega}{2T_0} x(x-2h)$$

$$y(x=h) = -\frac{\omega h^2}{2T_0}$$

$$\therefore d = \frac{\omega h^2}{2T_0}$$