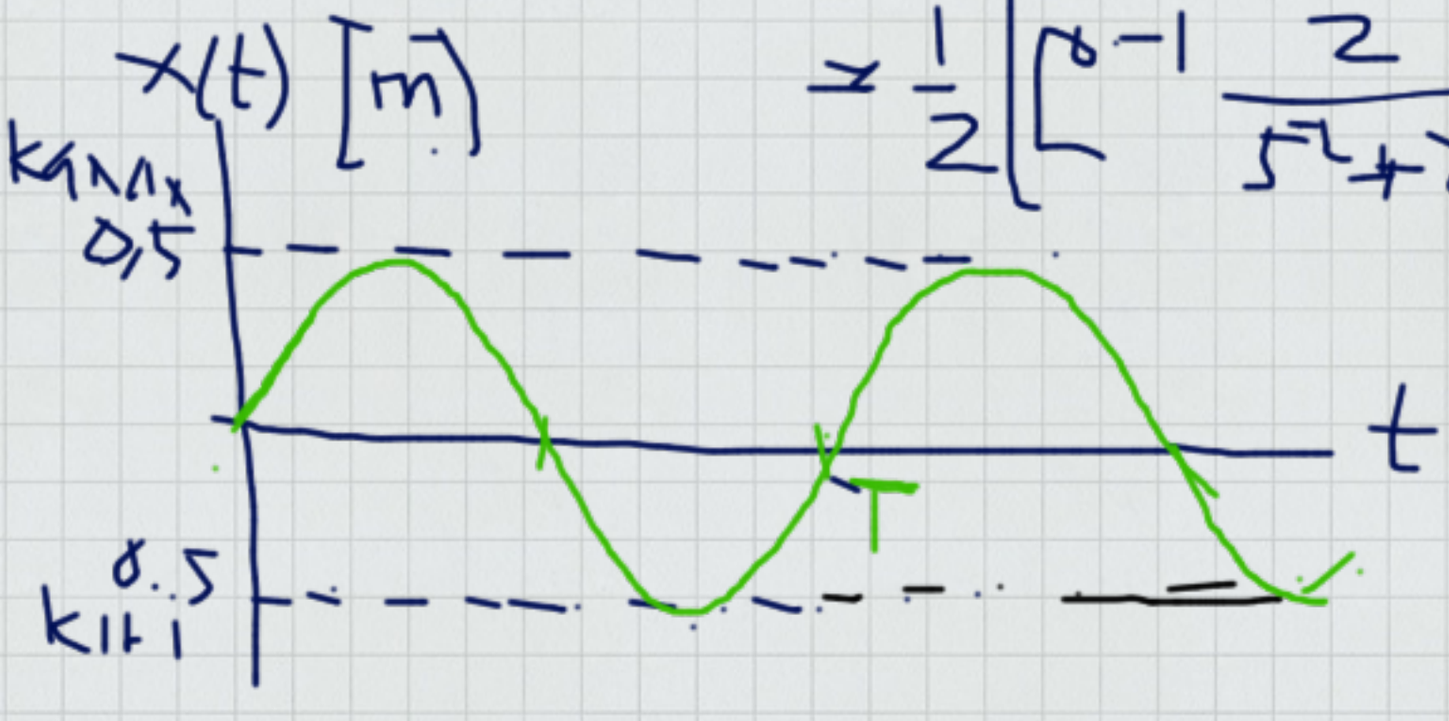
$$Ms^2X(s) + KX(s) = F(s)$$

$$[Ms^2 + K]X(s) = F(s) \longrightarrow G(s) = \frac{X(s)}{F(s)} = \frac{1}{Ms^2 + K}$$

$$= \frac{1}{s^2 + 4}$$

$$x(t) = \mathcal{L}^{-1}G(s) = \mathcal{L}^{-1}\frac{1}{s^2+4} = \mathcal{L}^{-1}\frac{1}{2}\left[\frac{2}{s^2+2^2}\right]$$

$$= \frac{1}{2}\left[\mathcal{L}^{-1}\frac{2}{s^2+2^2}\right] = \frac{1}{2}\sin 2t \quad [m]$$



T_z ? [sec]

$$\omega = \frac{2\pi}{T} = 2$$

$$2T = 2\pi \rightarrow T = \pi \text{ sec}$$