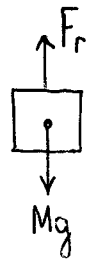
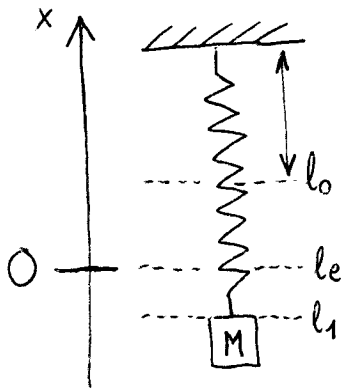


6.)  $l_0 = 0,5\text{m}$   $D = 100 \frac{\text{N}}{\text{m}}$   $M = 0,5\text{kg}$   $l_1 = 0,7\text{m}$   $a_0 = ?$   $10\text{cm}$  út után  $v = ?$

$$F_r = D\Delta l \quad \vec{a} = \frac{\vec{F}_e}{m} \quad x(t) = A \sin(\omega t + \delta) \quad \omega = \sqrt{\frac{D}{M}}$$



Egyensúlyi helyzet:  $\vec{a} = 0$   $\vec{F}_e = 0$

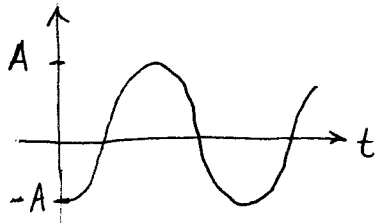
$$F_r = Mg$$

$$D(l_1 - l_0) = Mg \rightarrow \underline{l_1}$$

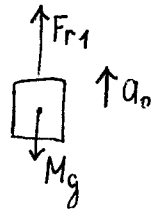
A kialakuló rezgés amplitúdója:

$$A = l_1 - l_0$$

$t = 0$ -ban  $x = -A$



Kiszdelti gyorsulás:



$$ma_0 = F_{r1} - Mg$$

$$ma_0 = D(l_1 - l_0) - Mg \rightarrow \underline{a_0}$$

tehát  $-\cos$  függvény

$$x(t) = -A \cos(\omega t) \quad \omega = \sqrt{\frac{D}{m}}$$

$$-A\text{-ból } 10\text{cm út} \rightarrow t_2 \rightarrow v(t) = \frac{dx}{dt} = A\omega \sin(\omega t) \rightarrow \underline{v(t_2)}$$