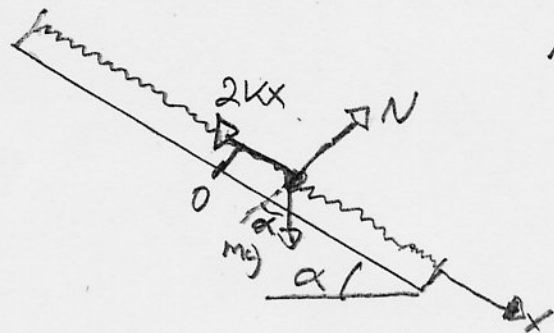


13.3



Origo mitt emellan fjädrarna
(i naturliga längden)

$$NII: \quad \searrow \quad mg \sin \alpha - 2kx = m \ddot{x}$$

$$\ddot{x} + \underbrace{\frac{2k}{m}}_{\omega_n^2} x = g \sin \alpha$$

$$\omega_n = \sqrt{2k/m}$$

Vid jämvikt gäller:
 $mg \sin \alpha - 2k\delta = 0$

$$k = \frac{mg \sin \alpha}{2\delta}$$

$$\therefore \omega_n = \sqrt{g \sin \alpha / \delta}$$

$$T_n = \frac{2\pi}{\omega_n} = 2\pi \sqrt{\delta / g \sin \alpha}$$

GK.