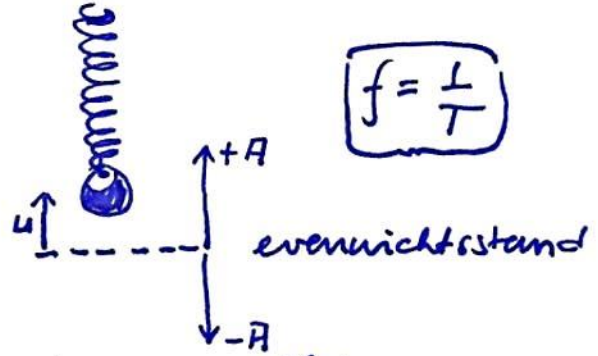
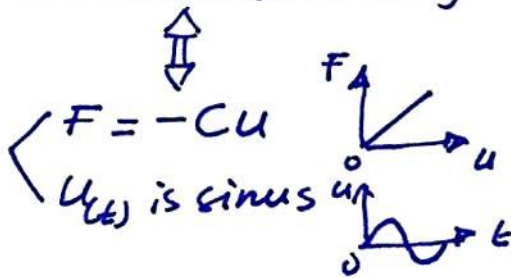


* Harmonische trilling



v.b.: veer, dobber, stemvork, slinger als α klein

$$T = 2\pi \sqrt{\frac{m}{c}}$$

$$T = 2\pi \sqrt{\frac{l}{g}}$$

$$v_{\max} = \frac{2\pi A}{T}$$

$$E = E_v + E_k$$

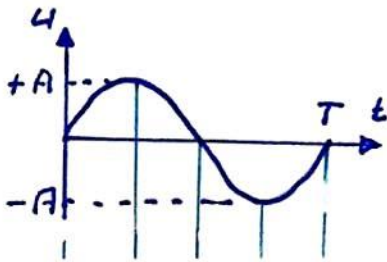
$$E_v = \frac{1}{2} Cu^2$$

$$E_k = \frac{1}{2} mv^2$$

$$E = 2\pi^2 m A^2 f^2$$

Resonantie: meestillen met een eigenfrequentie

* fase



$$u(t) = A \sin 2\pi f t$$

$$u(t) = A \sin 2\pi \varphi$$

met de fase $\varphi = \frac{t}{T}$ als sinus

$$A \sin \text{fase sinus: } \varphi = \varphi_0 + \Delta\varphi$$

$$\Delta\varphi = \frac{\Delta t}{T}$$

fase: $0 \quad \frac{1}{4} \quad \frac{1}{2} \quad \frac{3}{4} \quad 1$

φ_0 te vinden door links van 0 de sinus compleet te maken

gereducerde fase
 $\varphi^* = \varphi - n$

