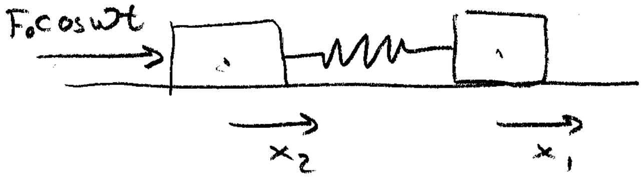

משוואות התנועה:

$$\begin{cases} m\ddot{x}_1 = K(x_2 - x_1) - \Gamma \dot{x}_1 \\ m\ddot{x}_2 = K(x_1 - x_2) - \Gamma \dot{x}_2 + F_0 \cos\omega t \end{cases}$$

$$\begin{cases} \Psi_a = x_1 + x_2 \\ \Psi_B = x_1 - x_2 \end{cases} \qquad \gamma \equiv \Gamma/m$$

$$\begin{cases} \ddot{\Psi}_a + \gamma \dot{\Psi}_a = \frac{F_0}{m}\cos\omega t \\ \ddot{\Psi}_B + \gamma \dot{\Psi}_B + \frac{2K}{m}\Psi_B = -\frac{F_0}{m}\cos\omega t \end{cases} \qquad \omega_0^2 = \frac{2K}{m}$$

$$\Psi_a = A_a \sin\omega t + B_a \cos\omega t \qquad B_a = -\frac{F_0}{m}\frac{1}{\omega^2+\gamma^2} \quad A_a = \frac{F_0}{m}\frac{\gamma}{\omega(\omega^2+\gamma^2)}$$

$$\Psi_B = A_B \sin\omega t + B_B \cos\omega t \qquad B_B = -\frac{F_0}{m}\frac{\omega_0^2-\omega^2}{(\omega_0^2-\omega^2)^2+\gamma^2\omega^2} \quad A_B = -\frac{F_0}{m}\frac{\gamma\omega}{(\omega_0^2-\omega^2)^2+}$$

מעבור ל x_1, x_2:

$$x_1 = \frac{1}{2}(\Psi_a + \Psi_B)$$

$$x_2 = \frac{1}{2}(\Psi_a - \Psi_B)$$