

Homework n. 1

Mass with the weight 365 kg causes elongation of a spring equal to 2,5 cm. Vibration of the mass is modelled as a system with single degree of freedom. The mass has initial displacement 1,5 cm and initial velocity 0,89 m/s. Determine the period of free vibration T , displacement at time 0,123 s, velocity at time 0,123 s, acceleration at time 0,123 s and draw the graphs of displacement, velocity and acceleration in time interval $\langle 0, T \rangle$.