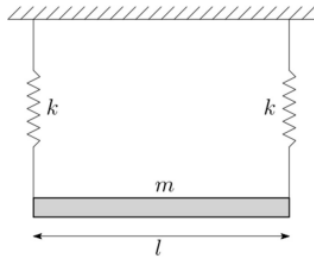# Practice Problem

A uniform rigid prismatic bar of total mass m is suspended from a ceiling by two identical springs as shown in figure.

Let ω_1 and ω_2 be the natural frequencies of mode I and mode II respectively $(\omega_1 < \omega_2)$.

The value of ω_2/ω_1 is _____ (rounded off to one decimal place).

A damper with damping coefficient, c, is attached to a mass of 5 kg and spring of stiffness 5 kN/m as shown in figure. The system undergoes under-damped oscillations.

If the ratio of the 3rd amplitude to the 4th amplitude of oscillations is 1.5, the value of c is _____ Ns/m (rounded off to the nearest integer).