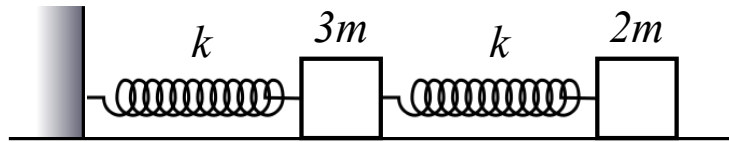


(1) Find the eigenfrequencies for the two-mass, two-spring system shown here:



Also describe the motion of the system for each of the two eigenfrequencies.

Note that the masses are unequal, and only one is attached to a fixed wall by a spring.

(2) The  $G$ -string on a standard guitar vibrates at 196 Hz. On one particular guitar, this string is 60 cm long and has a mass of 3.1 grams per meter. Calculate the tension on the string, both in Newtons and pounds.