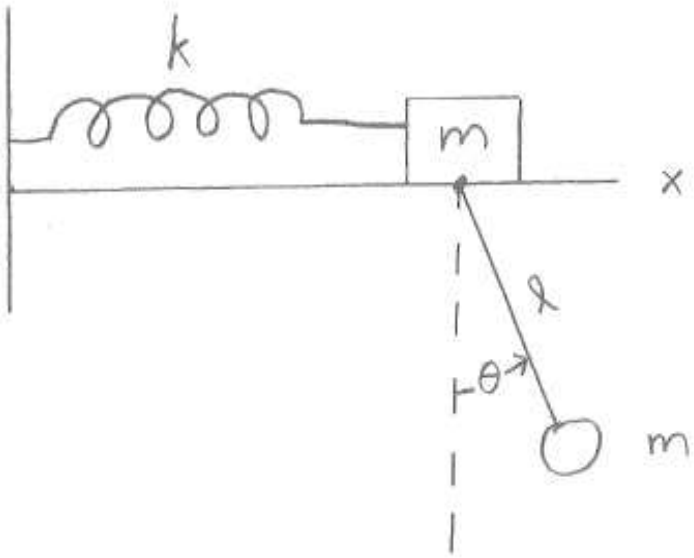
For PHYS 3356 Homework Set 3, Spring 2005

HW3 is this problem plus Fowles problem 11.20

Additional problem to HomeWork set 3



This figure shows a block that slides without friction on a plane with a simple pendulum attached to the bottom of it. All motion is in the plane of this paper. It is given that $\frac{k}{m} = \frac{g}{l} = {\omega_0}^2$, where g is the acceleration due to gravity. Find the normal modes of oscillation and their angular frequencies in terms of the coordinates $(q_1 \quad q_2) = (x \quad l\theta)$.