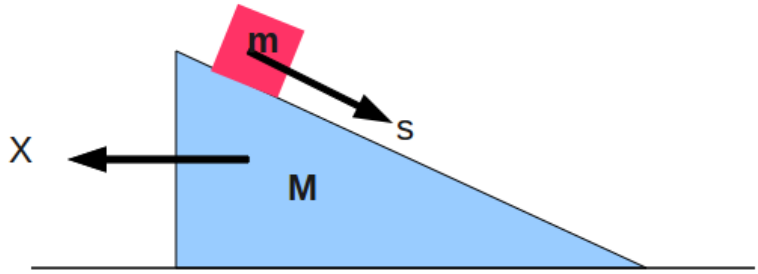
PHY 711 – Assignment #9

9/15/2014

Continue reading Chapters 3 and 6 in **Fetter and Walecka**.



1. The figure above shows a box of mass im sliding on the frictionless surface of an inclined plane (angle θ). The inclined plane itself has a mass M and is supported on a horizontal frictionless surface. Write down the Lagrangian for this system in terms of the generalized coordinates X and s and solve for the equations of motion, assuming that the system is initially at rest.