Physics 820 homework due Mon Sep 23

Reading: Chapters 2, 3.1-5

Problems:

1. Goldstein, Problem 2-2.

2. Goldstein, Problem 2-14.

3. Goldstein, Problem 2-20. Discuss the work only qualitatively.

4. By considering the respective Lagrangian, determine the integrals of motion for a particle moving in a uniform field $V = -\vec{F} \cdot \vec{r}$.

5. Goldstein, Problem 2-21 (a) and (c). You do not need to consider the laboratory coordinates.