Physics 214A | **Winter 2009**

Statistical Physics | **due 9:30 am Tuesday, February 24**

PROBLEM SET 6

Reading: Chapter 7 (sections 7.1–7.10) in Reif.

Problems:

1. Reif 7.1
2. Reif 7.2
3. Reif 7.3
4. Reif 7.5
5. Reif 7.7
6. Reif 7.14
7. In class (see notes for lecture 10) we considered a system of N noninteracting spins at temperature T in an external magnetic field H pointing along the z axis. These spins have total angular momentum $J = 1/2$ and $g = 2$. What is the entropy S of the system as a function of T and H?