

Physics 410 - 2003

Thermal Physics

Problem Set 11

The solutions are due on **March 31**

1. Calculate the chemical potential of an ideal Fermi gas for $\tau \ll \varepsilon_F$ (find the lowest-order term in τ/ε_F). (5 pt)
2. Chapter 7, p. 219, problem 5 (5 pt)
3. Chapter 7, p. 221, problem 8 (5 pt)
4. Chapter 7, p. 222, problem 12 (5 pt)

The problems are from Kittel & Kroemer, *Thermal Physics*, 2nd edition, (Freeman, NY 1980).