

140a HW 8 Due 3/15/19

★ All numbered exercises are from Blundell and Blundell.

1. Consider a system of two particles, which can each be in any of three states, with energy 0,  $\epsilon$ , and  $5\epsilon$ . The system is in thermal contact with a heat bath at temperature  $T$ .
  - (a) Find the partition function if the particles are classical and distinguishable.
  - (b) Find the partition function if the particles are identical bosons.
  - (c) Find the partition function if the particles are identical fermions.
2. 23.5.
3. 23.6.
4. 23.7.
5. 24.3.