Homework #12, ASTR 314, Spring 2013

Due Thursday, April 25, during class

Please turn in answers to the following problems. To receive full credit you must show all your work. Remember that while you may discuss how to solve problems with your classmates, the work you submit must be your own and never copied. Work that is copied will receive zero credit.

1. CORRECTED: Prove that a source with the spectrum of a blackbody with a temperature $T_0$ when redshifted by an amount $z$ will still have the spectrum of a blackbody but with temperature $T = T_0 \times (1 + z)$.

2. Carroll & Ostlie 29.18

3. Carroll & Ostlie 29.35

4. Carroll & Ostlie 29.39

5. Carroll & Ostlie 29.40