

Recommended Problems for Week 5

1. Problem 3.1, page 89.
2. Problem 3.3, page 90. (We'll work this one in class, but it's important enough to do twice.)
3. Problem 3.10, page 97. (If you need more practice with problems like this one, look in an introductory physics textbook that covers entropy and its relation to heat.)
4. Problem 3.14, page 97.
5. Problem 3.16, page 98. (Perhaps these days it would be better to do the calculation for a terabyte or a petabyte! As you may have heard, a large portion of the electricity use at data centers is for cooling to remove the expelled heat. Do you think today's computer chips are getting close to the thermodynamic efficiency limit?)