

### Problem Set 3

(due Friday, January 27, 4:00 pm)

1. Problem 2.9, page 60. For this exercise you need to use a computer spreadsheet program. In Excel, the function that computes “combinations” is called COMBIN; for example, to compute the number of ways of choosing 20 items from 100, you would enter “=COMBIN(100,20)”. Do NOT attempt to compute the combinations explicitly in terms of factorials, since this will generate overflow errors in the following problem. For further details, see the “computer problems” link on the web page for our textbook ([physics.weber.edu/thermal](http://physics.weber.edu/thermal)). Please turn in a printout showing the *modified* table and graph—not the original version that’s already printed in the textbook.
2. Problem 2.10, page 60. For this problem you needn’t print out your entire table, but you should print enough of it to justify your answers to the questions. Also be sure to print your graph.
3. Problem 2.12, page 61.
4. Problem 2.13, page 62.
5. Problem 2.16, page 63.
6. Problem 2.18, page 64.
7. Problem 2.26, page 72.
8. Problem 2.28, page 77.
9. Problem 2.29, page 77.
10. Problem 2.32, page 79.
11. Problem 2.36, page 79.