Instructions. The homework should be your own work, without any collaboration or consulting sources such as the Web. Please include partial solutions if you cannot fully solve a problem. Neatly write your solutions and staple your work; late homework will not be accepted. All problems below are the numbered exercises given in the textbook.

0. Read and understand Section 7.1.4 (we will also quickly cover it in class). In particular, understand the important function $\phi(N)$. (0 points)

1. Exercise 6.1. (5 points)
2. Exercise 6.2. (5 points)
3. Exercise 7.4. (You need to read Section 7.1.4 for this and the next two problems.) (15 points)
4. Exercise 7.5. (5 points)
5. Exercise 7.6. (5 points)