

Homework #4

Due November 16, 2011, beginning of the class

1. On hash functions
 - a) Problem 5.6.
 - b) Problem 5.19.
2. Find the solution of the system

$$x = 2 \pmod{3}$$

$$x = 1 \pmod{4}$$

$$x = 3 \pmod{7}$$

in Z_{84} . Show all your work. What is the general solution of the system over integers?

3. Problem 7.12. Don't forget to prove your answers.