

Homework 7

Due at the *beginning* of class on November 21

All numbered exercises refer to the second edition of the book.

1. Exercise 8.5.
2. Exercise 8.6.
3. (a) What is $\varphi(85)$? (Note that $85 = 5 \cdot 17$.)
(b) Find d such that $3d = 1 \bmod \varphi(85)$.
(c) Find $x \in \mathbb{Z}_{85}^*$ such that $x^3 = 2 \bmod 85$.
4. Exercise 8.19.