MATH 3375 (Theory of Cryptology) – Fall 2013

Homework Assignment 7

Due: Nov. 7, 2013

1. The following message was encoded via Hill's encryption scheme:

   CMYPZ GTAYO EQBYQ JLAOW INELN NECNN UESZT YTFRU OWYXH

   KYADM NJRUK CUFZP YPNNM XWSQQ OJMGO JZQZQ FLVAY XGIPR

   OPUFJ WTSVA ATQU

   In addition, you know that the name GEORGE PAPANDREOU appears in this message. Decode this message.

2. From Section 4.1 Exercise 1, 3, 5, 7

3. Suppose that you know the following facts about the number 14,803:

   (i) $14,803$ is the product of two primes.

   (ii) $\phi(14,803) = 14,560$.

   Can you now factor the number?