

## Math 2001: Homework P6

Due: October 16, 2013

1. From the book do problems:
  - (a) 3.2.4, 3.2.7
  - (b) 3.3.6, 3.3.15
2. Consider two pairs of integers  $(1597, 987)$  and  $(1590, 997)$ .
  - Find  $\gcd(1597, 987)$  and  $\gcd(1590, 997)$  using the Euclidean algorithm.
  - Which pair takes more steps in the Euclidean algorithm? Give an explanation for why this might be?
  - For the faster pair  $(m, n)$ , find  $k, l \in \mathbb{Z}$  so that  $\gcd(m, n) = km + ln$ .