## PMAT 3370 – Number Theory Fall 2006

## Assignment #5

## Instructions

- Answer each question completely; justify your answers.
- This assignment is due at: 5:00 pm on Wednesday October 25th.
- 1. Exercise 3.7.
- 2. Exercise 3.8.
- 3. Prove that a number is divisible by 3 if and only if the sum of its digits is divisible by 3.
- 4. Exercise 3.15.
- 5. Exercise 4.4.
- 6. Exercise 4.6.
- 7. Exercise 4.12.
- 8. Exercise 4.14.
- 9. Exercise 4.16.
- 10. Exercise 4.18.
- 11. Exercise 4.21.
- 12. Without factoring n, prove that n = 901 is composite.