

**Instructions**

- Answer each question completely; justify your answers.
  - This assignment is due at: 5:00 pm on Wednesday October 24th.
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.