Math 124 Winter 2009
Assignment #5

This assignment is due at the beginning of class on Thursday, March 26, 2009. Late assignments will not be accepted. You must submit solutions to all problems marked with an asterix (*).

YOUR ASSIGNMENT MUST BE STAPLED AND PROBLEM NUMBERS CLEARLY LABELLED. UNSTAPLED ASSIGNMENTS WILL NOT BE ACCEPTED! DO NOT CROWD YOUR WORK. DO NOT WRITE IN MULTIPLE COLUMNS.

1. * Section 1.1, page 39, #24

2. * Section 4.3, pages 284–286, #1bde, #4, #7bcd, #8

3. * Use Fermat's little theorem to calculate the remainder when the given number x is divided by the given divisor m.

  (a) $x = 99^{103}$, $m = 103$

  (b) $x = 44^{52}$, $m = 53$

  (c) $x = 56^{80}$, $m = 79$

4. * Show that $2^{86} + 5^{86}$ is divisible by 29.

5. * Section 4.4, page 294, #4, #5