
Math 4362 - Number Theory
Homework 4
Due in Class - Monday October 13, 2014

1. Solve the following linear congruences:

(a) $5x \equiv 2 \pmod{26}$

(b) $36x \equiv 8 \pmod{96}$

(c) $140x \equiv 133 \pmod{301}$

2. Solve each of the following sets of simultaneous congruences:

(a) $x \equiv 1 \pmod{3}, x \equiv 2 \pmod{5}, x \equiv 3 \pmod{7}$

(b) $x \equiv 5 \pmod{11}, x \equiv 14 \pmod{29}, x \equiv 15 \pmod{31}$

(c) $x \equiv 5 \pmod{6}, x \equiv 4 \pmod{11}, x \equiv 3 \pmod{17}$