MAT 312/AMS 351 – Fall 2010
Homework 6

1. Find x satisfying
$$\begin{cases} x \equiv 2 \text{ mod } 7 \\ x \equiv 9 \text{ mod } 23 \end{cases}$$

2. Find x satisfying
$$\begin{cases} x \equiv 5 \text{ mod } 11 \\ x \equiv 3 \text{ mod } 5 \\ x \equiv 4 \text{ mod } 7 \end{cases}$$

3. page 54 problem (1)

4. page 54 problem (3). *Hint:* Show that $a \equiv a^5$ mod 5 and mod 2.