

NT Sheet 3

1. Solve

$$x \equiv 1 \pmod{4}$$

$$\equiv 2 \pmod{3}$$

$$\equiv 3 \pmod{5}$$

2. Solve

$$x \equiv 2 \pmod{7}$$

$$\equiv 7 \pmod{9}$$

$$\equiv 3 \pmod{4}$$

3. Solve

$$7x \equiv 3 \pmod{12}$$

$$10x \equiv 6 \pmod{14}$$

$$5x \equiv 3 \pmod{7}$$

4. Solve $13x \equiv 71 \pmod{380}$ without using Extended Euclidean Algorithm (use CRT)

5. Solve $13x \equiv 71 \pmod{380}$ by solving $380y \equiv 71 \pmod{13}$