## CRYPTOGRAPHY HANDOUT 10

## CHINESE REMAINDER THEOREM

## 1. Problems

1. Solve  $x \equiv 3 \mod 7$  and  $x \equiv 5 \mod 15$  at the same time.

2. Solve  $x \equiv 2 \mod 8$  and  $x \equiv 5 \mod 13$  at the same time.

3. Solve  $x \equiv 3 \mod 5$  and  $x \equiv 2 \mod 9$  at the same time.

## 2. Questions and Observations

Write down any questions and observations that you have about solving simultaneous congruences: