# Number Theory Quiz III

## RDB

### June 22, 2022

**Problem 1**  Is $150$ congruent to $125$ mod 7?

**Problem 2**  How many mutually incongruent solutions are there to $11x \equiv 1 \pmod{100}$? (You don't have to say what the solutions are, just how many there are.)

**Problem 3**  By plugging values in, find the $x$ in $\{0, 1, 2, 3\}$ such that $2x \equiv 0 \pmod 4$. Give two more solutions not in this set.