

Quiz #3

Please print your name:

Problem 1. List all quadratic residues modulo 11.

Problem 2. How many invertible quadratic residues are there modulo 505? (101 is a prime.)

Problem 3.

- (a) Using the Chinese remainder theorem, solve $x \equiv 2 \pmod{5}$, $x \equiv 9 \pmod{11}$. (Steps needed for full credit.)
- (b) Using your answer from the first part, determine all solutions to $x^2 \equiv 4 \pmod{55}$.