

Number Theory

Worksheet 5

10 November, 2021

- 1) Determine whether 112 is quadratic residue or non-residue modulo 675.
- 2) Determine whether 31 is quadratic residue or non-residue modulo 47.
- 3) Determine the number of solutions of the congruence $x^4 \equiv 61 \pmod{117}$.
- 4) Find a primitive root of 3, 5, 7, 11 and 13.