

# Number Theory Quiz VI

RDB

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## Problem 1

- (a) Without finding them, how many primitive roots does 23 have?
- (b) Find the primitive roots of 7.

**Problem 2** Prove that  $a^{(p-1)/2} \equiv 1 \pmod{p}$  if  $a$  is a quadratic residue mod  $p$ .