

First lecture

- **INTRODUCTION**

Integers factorization, modular arithmetic

Sets, relations cardinality, induction

Combinatorics counting things

Groups symmetries, algebra

Graph theory networks

Logic, models proofs, infinities

- **Division with remainder**

Numbers in base t

- **Divisibility, $d \mid m$**

Primes

- **Greatest common divisor, $\gcd(m, n)$**

The Euclidean algorithm

The Diophantine $ax + by = c$