

## $p$ -adic numbers

- Rational points on hypersurfaces over  $\mathbb{F}_p$ ,  $\mathbb{Q}$ , and  $\mathbb{C}(t)$
- Basic valuation theory
- $p$ -adic numbers: construction, basic properties
- Hensel's lemma
- Artin's conjecture and Terjanian's counterexample
- Functions over the  $p$ -adics, series