

## Counting integral and rational points on curves, modulo $p$

### 14.1. Diagonal quadratics

### 14.2. Counting solutions to a quadratic equation and another proof of quadratic reciprocity

### 14.3. Cubic equations modulo $p$

### 14.4. The equation $E_b : y^2 = x^3 + b$

### 14.5. The equation $y^2 = x^3 + ax$

### 14.6. A more general viewpoint on counting solutions modulo $p$

### Appendix 14A. Gauss sums

### 14.7. Identities for Gauss sums

#### Another proof of the law of quadratic reciprocity

### 14.8. Dirichlet $L$ -functions at $s = 1$

### 14.9. Jacobi sums

### 14.10. The diagonal cubic, revisited