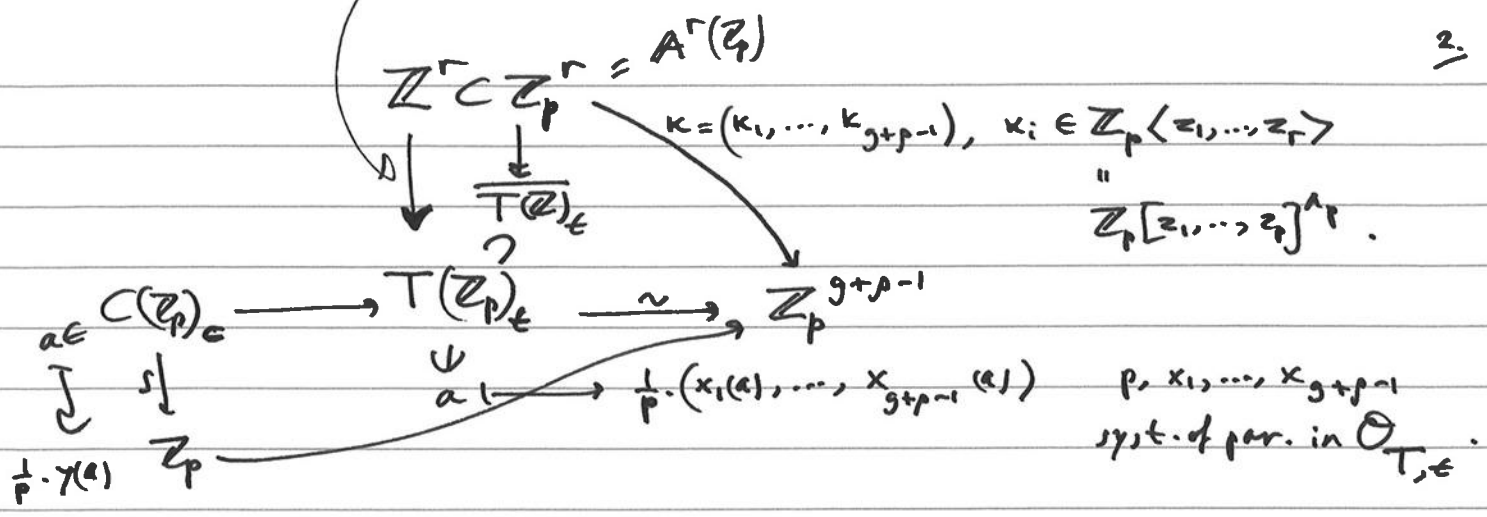
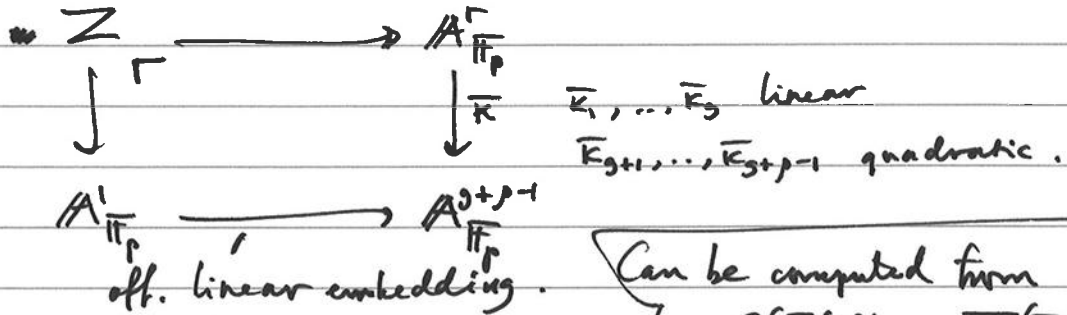


"quadratic" map.



Now reduce the geometry mod p:



Thm. Let $A := \mathcal{O}(Z)$. Suppose that $\dim_{\mathbb{F}_p}(A) < \infty$.

Then $\# C(Z)_c \leq \dim_{\mathbb{F}_p}(A)$.

Example treated by Conrado: $y^2 = x^6 + 4x^4 - 4$ from LMFDB, genus $g=r=2, p=2$. He uses $p=7$. All in 8 pages.