

HW 5: Elliptische Kurven I

- Hand in by May 24th 2016.

Exercise 1. Let A be a finitely generated \mathbb{Z} -algebra such that A is a field. Show that A is finite.

Exercise 2. The base field is an algebraically closed field k . Prove or disprove:

1. There is a surjective morphism of varieties $\mathbb{A}^1 \rightarrow \mathbb{P}^1$.
2. Any dense open subset of \mathbb{A}^1 is isomorphic (as a quasi-affine variety) to some closed subset of \mathbb{A}^2 .