

A NOTE ABOUT POTENTIAL GOOD REDUCTION

Recall: E/K has potential good reduction at v if there is a finite extension K'/K s.t. \tilde{E}/K' is smooth.

Prop. Let E/K be an elliptic curve. Then:

E has potential good reduction if and only if $j(E)$ is integral ($j(E) \in \mathcal{O}_v$).

Proof.

(E has mult redn if and only if v)

