# SELF MAPS OF $\mathbb{P}^1$ WITH FIXED DEGENERACIES

We prove that the set of PGL(2) isomorphism classes of non isotrivial, self maps of $\mathbb{P}^1$ of a given degree $d \geqslant 2$, tamely ramified , ramified in at least 3 points, with critically excellent reduction outside a given finite set S of places of K (a function field or a number field)

This is a "Shafarevich" type result (work with T Tucker and Lloyd West). Half the effort is to define critically excellent reduction because monic polynomial maps do not seem to have bad reduction at any place. Then the proof use the S-unit theorem and Grothendieck computation of the tangent to a map of schemes with given restriction to a closed subscheme.