1165-11-287 **Alexander Carney*** (alexanderjcarney@rochester.edu), **Ruthi Hortsch** and **Michael Zieve**. *Rational polynomials are (almost) always injective.*

Any polynomial $f \in \mathbb{Q}[X]$ induces a map $\mathbb{Q} \to \mathbb{Q}$. We show that this map is usually 1-to-1 and always at most 6-to-1 over all but finitely many values. Analogous bounds hold over every number field K. If we interpret Mazur and Merel's theorems on rational torsion of elliptic curves as bounding the rational N-to-1 behavior for morphisms between genus one curves, then our result can be seen as a parallel which doesn't require the structure of an abelian variety. We formulate a conjecture about morphisms between arbitrary varieties which implies both our result and the uniform boundedness conjecture for rational torsion on abelian varieties, and discuss implications to other conjectures and obstructions to proving it. (Received January 19, 2021)