1151-37-57 **John R Doyle**, **Meghan Grip*** (meghan.grip@gmail.com), **Emily Rachfal**, **Olivia Schwager** and **Matt Torrence**. *Rational Preperiodic points for $z^d + c$.*

Given a number field K and a polynomial $f_c(z) \in K[z]$ of degree at least 2, one can construct a finite directed graph whose vertices are the K-rational preperiodic points for f_c, with an edge $a \to b$ if and only if $f(a) = b$. The Uniform Boundedness Conjecture of Morton and Silverman suggests for a given K, there are only finitely many isomorphism classes of directed graphs that arise from f_c. In this article, we give conjecturally complete classifications of $z^4 + c$ and $z^3 + c$, like that of Poonen for $z^2 + c$ over $\mathbb{Q}$, and like Doyle for the cyclotomic quadratic fields $\mathbb{Q}(i)$ and $\mathbb{Q}(\omega)$. The main tools used are dynatomic modular curves and results about quadratic points on curves. (Received August 06, 2019)