

1135-11-689

David Krumm* (dkrumm@colby.edu). *A finiteness theorem for specializations of dynatomic polynomials.* Preliminary report.

Let $\Phi_n(c, x)$ denote the n -th dynatomic polynomial of the quadratic polynomial $x^2 + c$, viewed as a polynomial in two variables, and let G be the Galois group of Φ_n over the function field $\mathbb{Q}(c)$. It is known that Φ_n is irreducible and that G is isomorphic to a wreath product of a cyclic group and a symmetric group. Let E_n denote the set of rational numbers c such that the specialized polynomial $\Phi_n(c, x)$ is either reducible or has Galois group different from G . For $n \leq 4$ the set E_n is infinite but well understood. In this talk we will discuss the conjecture that E_n is finite for $n > 4$, in particular proving this for $n = 5$ and 6 . (Received September 13, 2017)