

1112-11-175

Bruce Reznick* (reznick@math.uiuc.edu), Department of Mathematics, 1409 W. Green St., Urbana, IL 61801. *Quotients of sums of distinct powers of three.* Preliminary report.

Let A denote the set of Newman polynomials, $\sum c_i x^i, c_i \in \{0, 1\}$. Which integers m may be written as $m = \frac{p(3)}{q(3)}$, where $p, q \in A$? How often can this happen? Interesting questions arise under the restrictions $q \mid p$ and $\frac{p}{q} \in A$. This problem arises in the study of the Cantor set, in ongoing research projects of the speaker with Katie Anders, Jayadev Athreya and Jeremy Tyson. (Received August 01, 2015)