1145-30-119 **Libby Farrell** and **Andres Zumba*** (andreszumba@fresnostate.edu). *Zero Distribution of a Sequence of Polynomials with a Higher Order Three Term Recurrence.*

We study the zero distribution of a sequence of polynomials with the recurrence $P_m(z) = -B(z)P_{m-r}(z) - A(z)P_{m-n}(z)$ where n and r are relatively prime and both not equal to 1. We have shown that in the case that $n = 4$ and $r = 3$, the zeros will lie on the curve given by $\mathrm{Im}\frac{A^r(z)}{B^n(z)} = 0$ and $\mathrm{Re}\frac{A^r(z)}{B^n(z)} \geq 0$, except for values of z which satisfy $B(z) = 0$. We also give results towards determining the zero distribution of the general recurrence. (Received August 03, 2018)