1086-11-455 **Avraham Bourla*** (abourla@smcm.edu), Department of Mathematics, St. Mary's College of Maryland, 18952 E. Fisher Rd, Saint Mary's City, MD 20686. *Symmetry in the Sequence of Approximation Coefficients.*

Let $\{a_n\}_1^\infty$ and $\{\theta_n\}_0^\infty$ be the sequences of partial quotients and approximation coefficients for the regular continued fraction expansion of an irrational number in the unit interval. We are going to find a real valued function $f$ on two variables, such that $a_{n+1} = f(\theta_{n-1}, \theta_n) = f(\theta_{n+1}, \theta_n)$. In tandem with a formula due to Dajani and Kraainkamp, we will write $\theta_{n\pm1}$ in terms of $(\theta_{n\mp1}, \theta_n)$, revealing an elegant symmetrical structure in this classical sequence. In particular, this will enable us to recover the entire sequence from a pair of consecutive terms. (Received September 03, 2012)