1105-11-83 **T. Alden Gassert*** (`thomas.gassert@colorado.edu`), Department of Mathematics, University of Colorado Boulder, Campus Box 395, Boulder, CO 80309. *Discriminants of simplest* 3^n*-tic extensions.*

Let $\ell > 2$ be a positive integer, ζ_ℓ a primitive ℓ-th root of unity, and K a number field containing $\zeta_\ell + \zeta_\ell^{-1}$ but not ζ_ℓ. In a recent paper, Chonoles et. al. study iterated towers of number fields over K generated by the generalized Rikuna polynomial, $r_n(x, t; \ell) \in K(t)[x]$. They note that when $K = \mathbf{Q}$, $t \in \{0, 1\}$, and $\ell = 3$, the only ramified prime in the resulting tower is 3, and they ask under what conditions is the number of ramified primes small. In this talk, we apply a theorem of Guàrdia, Montes, and Nart to derive a formula for the discriminant of $\mathbf{Q}(\theta)$ where θ is a root of $r_n(x, t; 3)$, answering the question of Chonoles et. al. in the case $K = \mathbf{Q}$, $\ell = 3$, and $t \in \mathbf{Z}$. (Received September 06, 2014)