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Chad Awtrey* (cawtre@elon.edu). *Cyclic Eisenstein polynomials of p -power degree.*

Let p be an odd prime number and \mathbf{Q}_p the field of p -adic numbers. For a positive integer n , local class field theory shows that there are precisely p^n nonisomorphic totally ramified Galois extensions of \mathbf{Q}_p of degree p^n . Moreover, each extension has a cyclic Galois group. It is therefore natural to ask for polynomials which define each extension. When $n = 1$, such polynomials are known from the work of Amano (1971). In this talk, we give analogous results for $n = 2$ and $n = 3$. (Received July 18, 2018)