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Barry R Smith* (barsmith@lvc.edu), Department of Mathematical Sciences, Lebanon Valley College, 101 N. College Ave., Annville, PA 17003. *Some congruences connecting values at $s = 0$ of partial zeta functions with units.* Preliminary report.

We present new congruences between (1): special values at $s = 0$ of partial zeta functions for certain abelian extensions K/\mathbb{Q} and (2): expressions created from units in K . These generalize congruences invented by Coates and Sinnott during their construction of p -adic zeta functions for real quadratic fields as well as congruences of Kiselev, Ankeney-Artin-Chowla and Feng. (Received September 21, 2010)