

1086-VJ-1104

Christopher Park Mooney* (christopher-mooney@uiowa.edu), 14 MacLean Hall,
Department of Mathematics, The University of Iowa, Iowa City, IA 52242. *τ -Factorization in
Commutative Rings with Zero-Divisors*. Preliminary report.

Much work has been done on generalized factorization techniques in integral domains, namely τ -factorization. There has also been substantial progress made in investigating factorization in commutative rings with zero-divisors. This presentation will cover work from an article which synthesizes work done in these two areas by extending the notion of τ -factorization to commutative rings that need not be domains. We define and classify relations between rings satisfying various τ -finite factorization properties. If time permits, we look into particular types of τ relations, which are interesting when there are zero-divisors present. These particular examples are closely related to zero-divisor graphs. (Received September 18, 2012)