

1077-13-2622

Amanda R. Curtis* (arcurtis@math.ucsb.edu), **Alexander J. Diesl** (adiesl@wellesley.edu) and **Jane C. Rieck** (rieck@math.wisc.edu). *Classifying annihilator-ideal graphs of finite commutative rings- Part I*. Preliminary report.

The ideal annihilator graph $\tilde{\Gamma}(R)$ of a ring R , created by M. Behboodi and Z. Rakeei, is defined as follows: vertices are nonzero ideals with nonzero annihilators, and an edge exists between two vertices if the product of the corresponding ideals multiply to zero. We pursue the question of whether or not a graph isomorphism $\tilde{\Gamma}(R) \cong \tilde{\Gamma}(S)$ requires the rings R and S have isomorphic ideal lattices, for finite rings. We prove such a theorem holds (with one small exception) for finite PIRs. (Received September 22, 2011)