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Stephen G. Hartke* (hartke@math.unl.edu), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588-0130, and **A. J. Radcliffe** and **Raghunath Tewari**. *The sign of a permutation of a multiset and Lozanić's Triangle*. Preliminary report.

The sign of a permutation π of a set is the parity of the number of transpositions needed to sort π . We analogously define the sign of a permutation σ of a *multiset* to be the parity of the minimum number of transpositions needed to sort σ . We develop a closed-form formula for the number of even and odd permutations of a multiset, and show its relation to Lozanić's Triangle, a classical combinatorial sequence similar to Pascal's Triangle. (Received February 02, 2009)