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William J. Keith* (wjkeith@mtu.edu), 316 Fisher Hall, 1400 Townsend Drive, Houghton, MI 49931. *Refinements of the q -analogue of the Frame-Robinson-Thrall formula by descents.*

The q -analogue of the Frame-Robinson-Thrall formula gives $\sum q^{\text{maj}(T)}$ where T ranges over all standard Young tableaux of a given shape λ . In pursuit of a conjecture of Sagan and collaborators on 321-avoiding permutations, a refinement of this formula was proved for tableaux of shapes $\lambda = (n, k)$ with a specified number of descents. In this talk we pursue this refinement further for its own interest, producing formulas for three-part partitions. We discuss the goal of a refinement for general partition shapes. (Received September 13, 2017)