1123-05-176 **Mark Bly*** (bly@math.utk.edu). *Two q-countings related to q-multinomial coefficients.*

Let V be an n-dimensional vector space over a finite field, and let Δ be the set of sequential arrangements of n-element multisets of the form $\{1^{n_1}, 2^{n_2} \ldots, k^{n_k}\}$. In the spirit of D.Knuth's (1971) providing a q-counting of integer partitions relating to q-binomial coefficients, we provide two q-countings of Δ relating to q-multinomial coefficients: (1) via a map from the set of chains of subspaces of V; (2) via a map from the set of ordered direct sum decompositions of V. (Received August 25, 2016)