

1071-22-74

Markus Hunziker* (Markus_Hunziker@baylor.edu), Department of Mathematics, Baylor University, One Bear Place #97328, Waco, TX 76798-7328, and **Mark R. Sepanski**. *Abelian ideals of a Borel subalgebra, generalized Young diagrams, and subsets of simple roots*. Preliminary report.

Let \mathfrak{g} be a complex simple Lie algebra and \mathfrak{b} a Borel subalgebra of \mathfrak{g} . Recently, D. Panyushev noticed that the number of abelian ideals of \mathfrak{b} with k generators is equal to the number of subdiagrams of the Dynkin diagram of \mathfrak{g} with k connected components. In this talk, we will use a generalization of Young diagrams to give bijective proofs of these equalities when \mathfrak{g} is of classical type. We also show the non-existence of bijections that would satisfy certain nice properties across all types. (Received February 16, 2011)