

1135-05-2070

Nathan F Williams* (nathan.f.williams@gmail.com) and **Marko Thiel**. *Winnie-the-Pooh and the Strange Expectations*. Preliminary report.

We previously generalized D. Armstrong's conjecture (and P. Johnson's proof) for the expected number of boxes in a simultaneous core to simply-laced type (we now have a generalization to all affine Weyl groups). By analogy, we were led to consider the expected norm of a weight in a highest weight representation V_λ of a complex semisimple Lie algebra \mathfrak{g} . We give a proof that this expectation is $\frac{1}{h+1}(\lambda + 2\rho, \lambda)$ by relating it to the "Winnie-the-Pooh problem." Our proof works for all types except A and C ; the same formula holds in these two remaining types, but we are forced to provide a direct computation. This is joint work with Marko Thiel. (Received September 25, 2017)