

1086-05-416

Kate Rudolph* (k8r@mit.edu). *Pattern Popularity in 132-avoiding Permutations.*

The popularity of a pattern p is the total number of copies of p within all permutations of a set. We address popularity in the set of 132-avoiding permutations. Bóna showed that in this set, all other non-monotone length-3 patterns are equipopular, and proved equipopularity relations between some length- k patterns of a specific form. We prove equipopularity relations between general length- k patterns, based on the structure of their corresponding binary plane trees. Our result explains all equipopularity relations for patterns of length up to 7, and we conjecture that it provides a complete classification of equipopularity in 132-avoiding permutations. (Received August 30, 2012)