

1082-05-266

Brian Nakamura*, bnaka@math.rutgers.edu, and **Doron Zeilberger**. *Counting permutations with exactly r occurrences of the pattern 123*. Preliminary report.

We will consider the problem of enumerating permutations that contain exactly r occurrences of the pattern 123. Previous work by Noonan and Zeilberger considered this problem and gave a concrete method of enumeration for $r \leq 2$. We will discuss an alternate approach using functional equations to enumerate such permutations. This new approach also works for larger r values, and in some instances, we can also (rigorously) prove closed form formulas.

(Joint work with D. Zeilberger) (Received July 09, 2012)