

GENERATING FUNCTIONS FOR τ -MATCHES

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In previous work by Jeff Remmel, the generating function that counts the number of descents in a permutation of length n is found by utilizing a homomorphism defined by its action on the elementary symmetric function basis. In this work, we first define a τ -match to be a string of consecutive entries in a permutation which are Wilf equivalent to τ . We then generalize Remmel's technique to find the generating function for the number of τ -matches in a permutation of length n . We look at several special cases where this technique yields a clean result.