

Almost Avoiding Pairs of Permutations

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There are several ways to consider “almost-avoidance” in terms of pattern avoidance. For this talk, when we say that a permutation almost avoids a permutation q , we will mean that one needs to remove at most one entry for the resulting permutation to avoid q entirely. We extend this notion to pairs of permutations. That is, a permutation almost avoids a pair of permutations if the removal of at most one entry causes the resulting permutation to avoid both of the given patterns q_1 and q_2 . We will denote the number of such permutations of length n by $A_{n,1}(q_1, q_2)$. In particular, we examine the case when $q_1 = 213$ and $q_2 = 231$.