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Tucker J. Ervin, Blake Jackson* (bajackson9@crimson.ua.edu), **Jay Lane, Kyungyong Lee, Son Dang Nguyen, Jack O’Donohue** and **Michael Vaughan**. *Fixed Q under the reverse operation in the RSK correspondence.*

The RSK correspondence is a bijection between permutations and pairs of standard Young tableaux with identical shape, where the tableaux are commonly denoted P (insertion) and Q (recording). It has been an open problem to demonstrate

$$|\{w \in \mathfrak{S}_n \mid Q(w) = Q(w^r)\}| = \begin{cases} 2^{\frac{n-1}{2}} \binom{n-1}{\frac{n-1}{2}} & n \text{ odd} \\ 0 & n \text{ even} \end{cases},$$

where w^r is the reverse permutation of w . We first give a broad counting problem and introduce notation. Next, we sketch the proof of the above identity. (Received September 20, 2021)