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Tucker L. Dowell* (tucker.dowell@pop.belmont.edu) and **Brad Schleben**. *Counting Elements of Particular Orders in the Symmetric Group*.

The number of elements that square to the identity in the symmetric group S_n is determined by a well-known recursion. We study a generalization of this question: for which values of k are there exactly k elements such that x^k is the identity? Given any n , we determine the greatest $k < n!$ and the least $k > 1$ that satisfy this condition. (Received September 20, 2016)