We view the equation $ab = ba$ in a finite group as a special case of the equation $a_1a_2\cdots a_n = (a_1a_2\cdots a_n)\sigma$ where the right hand side represents a reordering of the product by a permutation $\sigma$ on $n$ symbols. Investigating solutions to the general case leads to a generalization of the probability that two elements in a finite group commute, and spawns a discussion of scrambling numbers, derangements, and factoring permutations into generalized block transpositions. (Received September 25, 2012)