1. How many ways are there to $k$-color an $n \times n$ chessboard when $n$ is odd. The group $G$ is the usual 8 element group $e, a, b, c, p, q, r, s$.

2. How many ways are there to arrange 2 M’s, 4 A’s, 5 T’s and 6 H’s under the condition that any arrangement and its inverse are to be considered the same.

3. How many ways are there of $k$-coloring the squares of the cross below if the group acting is $e_0, e_1, e_2, e_3$ where $e_j$ is rotation by $2\pi j/4$. Assume that instead of 13 squares there are $4n + 1$. 

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