

## **On the Likelihood of Symmetrical Cayley Maps for Certain Abelian Groups**

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Let  $\Gamma$  be a finite group and let  $\Delta$  be a generating set for  $\Gamma$ . A Cayley map is an orientable 2-cell imbedding of the Cayley graph  $G_\Delta(\Gamma)$  such that the rotation of arcs emanating from each vertex is determined by a unique cyclic permutation of generators and their inverses. A probability model for the set of all Cayley maps for a fixed group and generating set, where the distribution is uniform, is investigated for certain finite abelian groups with generating set chosen as the standard basis.