Further, denote the mappings

$$x \to xn \ (= X) \quad \text{and} \quad y \to my \ (= Y)$$

by α^{-1} and β^{-1}, respectively. Then α^{-1} and β^{-1} are bijections as G is finite. Hence α and β are also bijections, and we can write $x + y = x^\alpha y^\beta$ for all x, y in G. Consequently $(G, +)$ is isotopic to $(G, \cdot)$; further $(G, +)$ is an abelian group by Theorem 5.

The proof of the converse part of the theorem is the same as that of Theorem 6.

Acknowledgement. I am highly indebted to Prof. P. B. BHATTACHARYA, Head of the Department of Mathematics, University of Delhi, for guidance and encouragement during the preparation of the paper.

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