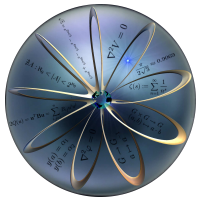

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proof that all cyclic groups are abelian

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The following is a proof that all cyclic groups are abelian.

Proof. Let G be a cyclic group and g be a generator of G. Let $a, b \in G$. Then there exist $x, y \in \mathbb{Z}$ such that $a = g^x$ and $b = g^y$. Since $ab = g^x g^y = g^{x+y} = g^{y+x} = g^y g^x = ba$, it follows that G is abelian. $\square$