

A DIRECT PROOF OF ALBERT'S THEOREM

Lemma. *Let G be a group, $a \in G$. Put $x * y = xa^{-1}y$ for all $x, y \in G$. Then $(G, *)$ is a group, and $x \mapsto ax$ is an isomorphism $(G, \cdot) \cong (G, *)$.*

Proof. Indeed $L_a(xy) = a \cdot xy = ax \cdot a^{-1} \cdot ay = L_a(x) * L_a(y)$. □

Albert's Theorem. *Every loop isotopic to a group G is isomorphic to G .*

Proof. Every loop isotopic to a group G is isomorphic to a principal isotope with operation $x * y = x/f \cdot e \setminus y$, where $e, f \in G$. Put $a = ef$. Since G is a group, $x * y = xf^{-1}e^{-1}y = xa^{-1}y$. The result thus follows from the lemma. □