

THE INVERSE OF THE INVERSE – ANSWER

Theorem: Let G be a group, and let $a \in G$. Then $a = (a^{-1})^{-1}$.

Proof: Let G be a group, and let $a, a^{-1} \in G$. Then $aa^{-1} = e$, the identity. But on the other hand, $(a^{-1})^{-1}(a^{-1}) = e$. Hence, by the Right Cancellation Theorem, it follows that $a = (a^{-1})^{-1}$.

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