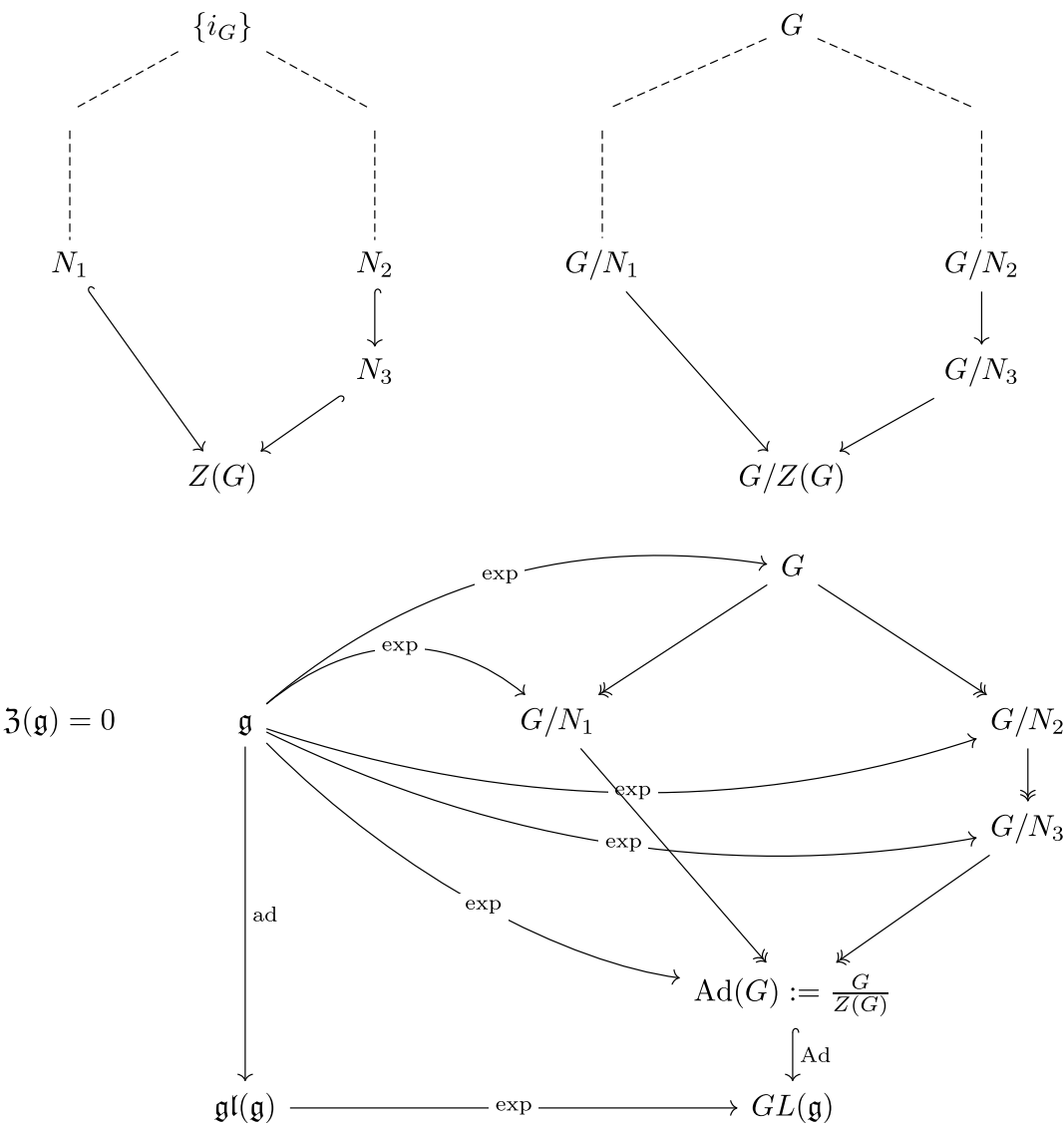


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Connected Lie groups with discrete center

Proposition:? A connected Lie group G has **discrete center** $Z(G) \iff \mathfrak{g} := \text{Lie}(G)$ has **trivial center** $\mathfrak{z}(\mathfrak{g}) = \{0\}$.

Let G be the **simply connected** Lie group with Lie algebra $\mathfrak{g}$ with **trivial center**. Then $Z(G)$ is the **maximal** discrete normal subgroup of G and $G/Z(G)$ the **minimal** quotient by a discrete normal subgroup.



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