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0.1 Commutation of Lie groups

We can measure commutation of Lie groups using:

$$ABA^{-1}B^{-1}$$

If the group commutes then:

$$ABA^{-1}B^{-1} = BA^{-1}B^{-1} = I$$

0.1.1 Commutation of Lie algebra: COMPLETE THIS

This corresponds to $[A, B] = AB - BA$ in the underlying lie algebra, if we expand.

$$A = e^{ta}$$

$$B = e^{tb}$$

$$ABA^{-1}B^{-1} = e$$