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Semi-simple $\mathbb{R}$ -Lie groups of dimension 6

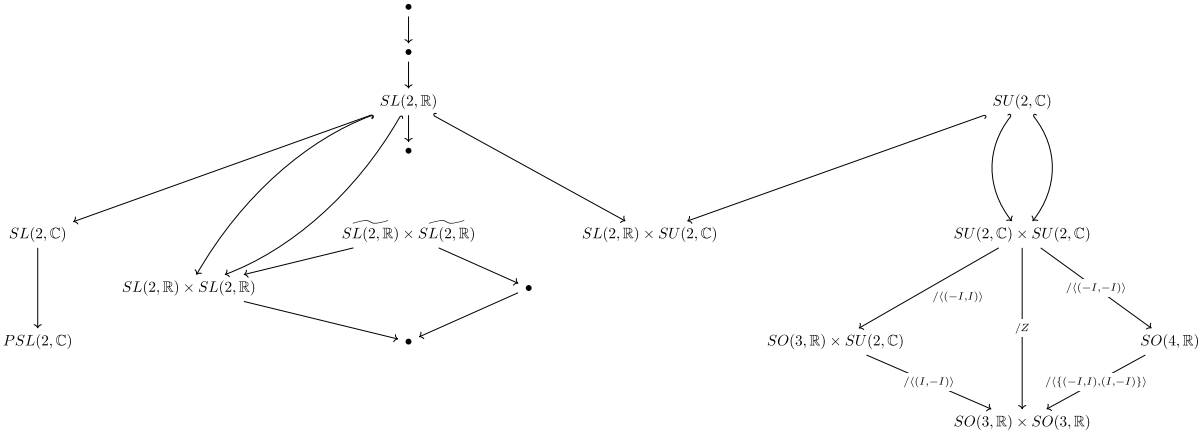
By

Proposition?: The following list exhausts all *semi-simple* Lie $\mathbb{R}$ -algebras of dimension 6 upto isomorphism:

- $\mathfrak{sl}(2, \mathbb{R}) \oplus \mathfrak{sl}(2, \mathbb{R})$
- $\mathfrak{sl}(2, \mathbb{R}) \oplus \mathfrak{su}(2, \mathbb{C})$
- $\mathfrak{su}(2, \mathbb{C}) \oplus \mathfrak{su}(2, \mathbb{C})$
- $\mathfrak{sl}(2, \mathbb{C}) \cong \mathfrak{so}(3, \mathbb{C})$

we have the list of all semi-simple $\mathbb{R}$ -Lie groups of dimension 6

Lie algebra	Lie groups
$\mathfrak{sl}(2, \mathbb{C})$	$\begin{array}{c} SL(2)(\mathbb{C}) \\ \downarrow \\ PSL(2)(\mathbb{C}) \end{array}$
$\mathfrak{so}(4, \mathbb{R}) \cong \mathfrak{su}(2, \mathbb{C}) \times \mathfrak{su}(2, \mathbb{C})$	$\begin{array}{ccccc} & & SU(2, \mathbb{C}) \times SU(2, \mathbb{C}) & & \\ & \swarrow & \downarrow & \searrow & \\ SO(3, \mathbb{R}) \times SU(2, \mathbb{C}) & & \mathbb{Z} & & SO(4, \mathbb{R}) \\ & \searrow & \downarrow & \swarrow & \\ & & SO(3, \mathbb{R}) \times SO(3, \mathbb{R}) & & \end{array}$ <i>(Note: The diagram above is a simplified representation of the quotient maps shown in the image. The actual diagram shows quotient maps by $\langle(-I, I)\rangle$, $\langle(I, -I)\rangle$, $\langle(-I, -I)\rangle$, and $\langle((-I, I), (I, -I))\rangle$.)</i>



Current note has 0 direct children and 0 total descendants.

- structures based on sets
 - manifolds
 - $\mathbb{R}$ -manifold group (Lie groups).
 - Semi-simple $\mathbb{R}$ -Lie groups
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And it has 1 siblings.

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