

# A Classification of Lie Algebras of Pseudo-Unitary Groups in the Techniques of Clifford Algebras

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**Abstract.** In this paper we present new formulas, which represent commutators and anticommutators of Clifford algebra elements as sums of elements of different ranks. Using these formulas we consider subalgebras of Lie algebras of pseudo-unitary groups. Our main techniques are Clifford algebras. We have found 12 types of subalgebras of Lie algebras of pseudo-unitary groups.

**Keywords.** Clifford algebra, pseudo-unitary group, Lie algebra, Lie group, commutators, anticommutators.

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