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Abstract

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Keywords: keyword 1, keyword 2, keyword 3, keyword 4.

2020 MSC: 99A99, 99B99, 99C99.

1 Introduction

Your text goes here. Separate text sections with the standard \LaTeX sectioning commands. The concepts presented here are now in conventional employment in mathematics. Vector spaces are taken over the field $\mathbb{K} = \mathbb{R}$, however, established properties are easily extended to $\mathbb{K} = \mathbb{C}$. This is a good place to ask a question to test learning progress or further cement ideas into students' minds. With the compact formula for Möbius addition in hand, we give an algebraic proof that the unit ball of \mathbb{R}^n with Einstein addition does form a B-loop or a gyrocommutative gyrogroup with the uniquely 2-divisible property. As a consequence, we give a characterization of associativity and commutativity of the elements of Einstein gyrogroup (\mathbb{B}, \oplus_E) [5].

2 Preliminaries

Your text goes here. Use the \LaTeX automatism for your citations [1–5].

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2.1 Subsection Heading

Your text goes here.

$$\mathbf{a} \times \mathbf{b} = \mathbf{c} + \sum_{i=1}^n C_i \tag{2.1}$$

2.1.1 Subsubsection Heading

Your text goes here. Use the \LaTeX automatism for cross-references as well as for your citations, see Section 2.1.

Theorem 2.1. *Theorem text goes here.*

Proof. Proof goes here... □

Lemma 2.2. *Lemma text goes here.*

3 Main Results

Problem 3.1. The problem is described here.

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References

- [1] M. Ferreira, *Hypercomplex analysis and applications*, Trends in Mathematics, ch. Gyrogroups in Projective Hyperbolic Clifford Analysis, pp. 61–80, Springer, Basel, 2011.
- [2] M. Ferreira and G. Ren, *Möbius gyrogroups: A Clifford algebra approach*, J. Algebra **328** (2011), 230–253.
- [3] Y. Friedman and T. Scarr, *Physical applications of homogeneous balls*, Progress in Mathematical Physics, vol. 40, Birkhäuser, Boston, 2005.
- [4] S. Kim and J. Lawson, *Unit balls, Lorentz boosts, and hyperbolic geometry*, Results. Math. **63** (2013), 1225–1242.
- [5] A. A. Ungar, *Einstein's Special Relativity: The hyperbolic geometric viewpoint*, PIRT Conference Proceedings, 2009, Budapest, September 4–6, 2009, pp. 1–35.