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Title:	Zero- divisors and idempotents in quandle rings
Authors:	Singh, Mahender (/jspui/browse?type=author&value=Singh%2C+Mahender)
Keywords:	Idempotents Zero-divisors Quandle rings
Issue Date:	2022
Publisher:	arXiv
Citation:	Osaka Journal of Mathematics, 59(3), 611-637.
Abstract:	Abstract. The paper develops further the theory of quandle rings which was introduced by the authors in a recent work. Orderability of quandles is defined and many interesting examples of orderable quandles are given. It is proved that quandle rings of left or right orderable quandles which are semi-latin have no zero-divisors. Idempotents in quandle rings of certain interesting quandles are computed and used to determine sets of maximal quandles in these rings. Understanding of idempotents is further applied to determine automorphism groups of these quandle rings. Also, commutator width of quandle rings is introduced and computed in a few cases. The paper conclude by commenting on relation of quandle rings with other well-known non-associative algebras.
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