
Free Steiner loops

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Free Steiner loops form a variety, therefore we can operate with free objects on this variety. We give a construction of free Steiner loops, determine their multiplication group and focus our attention on automorphisms.

The main results are that all automorphisms of the free Steiner loops are tame. Furthermore, the group of automorphisms cannot be finitely generated when the loop is generated by more than 3 elements. In the case of 3-generated free Steiner loop we specify the (triples of) generators of the automorphism group.

Finally, we present some results about centrally nilpotent Steiner loops of class 2.