

On two-dimensional power associative algebras over algebraically closed fields and \mathbb{R}

ABSTRACT

In this paper we describe all power-associative algebra structures on a two-dimensional vector space over algebraically closed fields and \mathbb{R} . The list of all two-dimensional left(right) unital power-associative algebras, along with their unit elements, is specified. Also we compare the result of the paper with that results obtained earlier.

Keyword: Power-associative algebra; Isomorphism; Classification; Unital algebra