

On Octonionic Polynomials

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Abstract. We discuss the generalization of results on quaternionic polynomials to the octonionic polynomials. In contrast to the quaternions the octonionic multiplication is non-associative. This fact although introducing some difficulties nevertheless leads to some new results. For instance, the monic and non-monic polynomials do not have, in general, the same set of zeros.

Concerning the zeros, it is shown that in the monic and non-monic cases they are not the same, in general, but they belong to the same set of conjugacy classes.

Despite these difficulties created by the non-associativity, we obtain equivalent results to the quaternionic case with respect to the number of zeros and the procedure to compute them.

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