

TENSOR PRODUCTS OF CLIFFORD ALGEBRAS

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In [2], Jacobson viewed Clifford algebras as tensor products of Clifford algebras of lower dimensions. We develop further this point of view on Clifford algebras. We consider real or complex Clifford algebras as tensor products of Clifford algebras of dimensions 2 and 1 and obtain an analog (in terms of tensor products) of Cartan's classification of real Clifford algebras. In our opinion, the new point of view gives greater flexibility to the theory of Clifford algebras and extends the possibilities of application of the mathematical apparatus of Clifford algebras.

It is proved [1] that the tensor product of any Clifford algebras is isomorphic to a single Clifford algebra over some commutative algebra. It is also proved that any complex or real Clifford algebra $Cl(p, q)$ can be represented as a tensor product of Clifford algebras of the second and first orders. A canonical form of such a representation is proposed.

REFERENCES

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- [2] N. Jacobson, Structure and Representations of Jordan Algebras (Am. Math. Soc., Providence, RI, 1968), Colloq. Publ. 39.