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Bernstein algebras.
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An algebra, not necessarily associative, that admits a nontrivial homomorphism $w\colon a \to w(a)$, is said to be baric. A baric algebra that satisfies the identity $(a^2)^2 = w^2(a)a^2$ is called a Bernstein algebra. The name arises from the algebraic formulation of a problem in population genetics, studied mathematically by S. N. Bernstein in the 1920s. The reviewer introduced a decomposition of finite-dimensional Bernstein algebras in terms of an idempotent, which has been used in several subsequent studies. In the present paper the author notes that this decomposition has the same structure as the Peirce decomposition of a finite-dimensional power-associative algebra in terms of an idempotent. (Bernstein algebras are not in general power-associative.) In terms of Peirce theory, she shows that in a Bernstein algebra all idempotents are principal and thus primitive. Hence, the Peirce decomposition cannot be further decomposed. She deduces a necessary and sufficient condition for a Bernstein algebra to be Jordan, and obtains a number of special results from it. *P. Holgate*