On Bernstein algebras of $n$th order. (English summary)

Summary: “Let $(A, \omega)$ be a finite-dimensional $n$th order Bernstein algebra over an infinite field $K(\text{char } K \neq 2)$. If $e \in A$ is a nontrivial idempotent then $A = Ke \oplus U_e \oplus V_e$ where $U_e = \{x \in \text{Ker } \omega\mid ex = \frac{1}{2}x\}$ and $V_e = \{x \in \text{Ker } \omega\mid R^n_e x = 0\}$. In this paper we show the following results: (1) The dimension of $U_e$ does not depend on idempotent $e$, (2) if $K = \mathbb{R}$ and $\dim U_e = r$ then there is an $r$-parametric family of idempotents of the $A$, (3) if $K = \mathbb{R}$ then $\dim_{\mathbb{R}} V_e \geq n$.”

{For the entire collection see MR1338148 (96a:17001)}

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