

IDENTITIES OF FINITELY GENERATED ALTERNATIVE AND MALCEV ALGEBRAS

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We prove that for every natural number n there exists a natural number $f(n)$ such that every multilinear skew-symmetric polynomial on $f(n)$ variables which vanishes in the free associative algebra vanishes as well in any n -generated alternative algebra over a field of characteristic 0. Similarly, for any n there exists $g(n)$ such that every multilinear skew-symmetric polynomial on $g(n)$ variables vanishes in any n -generated Malcev algebra over a field of characteristic 0. Before a similar result was known only for a series of skew-symmetric polynomials of special type on $2m+1$ variables constructed by the author, where $m > \frac{C_n^1 + C_n^2 + C_n^3}{2}$.