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**A generalization of the Cayley-Hamilton theorem.**

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The author proves that the determinant of the matrix  $[b_{ij}A - a_{ij}B]_{n \times n}$ , which is regarded as an  $n \times n$  block matrix with pairwise commuting entries and where  $A = [a_{ij}]_{n \times n}$ ,  $B = [b_{ij}]_{n \times n}$  are two commuting square matrices of order  $n$  over an arbitrary commutative ring, is exactly equal to the  $n \times n$  zero matrix. If  $B$  is the identity matrix, then the result is equivalent to the Cayley-Hamilton theorem. *Costică Moroşanu (Iaşi)*

*Classification:* H65

*Keywords:* matrix equations and identities; determinants; Cayley-Hamilton theorem

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