

MORE ON POLYNOMIAL BEZOUTIANS WITH RESPECT TO A GENERAL BASIS*

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Abstract. We use unified algebraic methods to investigate the properties of polynomial Bezoutians with respect to a general basis. Not only can three known results be easily verified, but also some new properties of polynomial Bezoutians are obtained. Nonsymmetric Lyapunov-type equations of polynomial Bezoutians are also discussed. It turns out that most properties of classical Bezoutians can be analogously generalized to the case of polynomial Bezoutians in the framework of algebraic methods.

Key words. Polynomial Bezoutians, General basis, Algebraic methods.

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