

DIVISION BY 1.

ABSTRACT. Given two polynomials in one variable x of consecutive degrees, the Euclidean division produces a sequence of linear factors $ax+b$, where the coefficients are symmetric functions of the roots of the two polynomials. One can as well divide two formal series in x , producing an infinite sequence of linear factors, but now the case where one of the two series is equal to 1 is generic ! The functions obtained in the Euclidean division occur in the theory of continuous fractions, orthogonal polynomials, Pade approximates, and can be computed using combinatorial objects like Dyck paths.