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TITLE: On a problem of Polya and some of its evolutions.

ABSTRACT: Around 1921 Polya posed a problem about algebraicity of the indefinite integral of an algebraic function, in terms of the integrality of the coefficients in a power-series expansion. This was solved much later by transcendence techniques. It also connects with a conjecture of Grothendieck on linear differential equations over polynomial rings, and with other number-theoretical issues. We shall survey on the topic, also illustrating a question related to a different possible approach to Polya's issue, and some answers given by Katz.