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Properties of q -holonomic functions. (English summary)

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q -holonomic functions are solutions of polynomial homogeneous linear q -differential equations. For example, q -hypergeometric functions are q -holonomic. The paper gives constructive proofs that sums, products, q -derivatives and compositions with x^n ($n \in \mathbf{N}$) of q -holonomic functions are q -holonomic functions as well. The order bounds in the algorithms are sharp.

Reviewed by *Raimundas Vidunas*

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Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.