

1106-39-1805

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68114. *Concavity and Convexity in Discrete Fractional Calculus.*

In this talk we will present some recent results on concavity and convexity of functions in the discrete fractional calculus. In particular, we shall indicate how certain sign conditions imposed on the operator Δ_a^ν (analogous to what one learns in the elementary single variable calculus) imply either the concavity or convexity of a function $y : \mathbb{N}_a \rightarrow \mathbb{R}$ on a subset of the function's domain. Some consideration of related open problems in the area will also be addressed. (Received September 15, 2014)