Derivatives of fractional order of continuous functions
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Abstract

Let u be a real function continuous in the real number set and sufficiently regular for $x \rightarrow -\infty$; in this paper I prove that if u satisfies a Holder condition with exponent $\alpha \in]0, 1[$, then all the derivatives of fractional order less than α of u are continuous and conversely if the fractional derivative of order α of u is continuous and sufficiently regular for x$\rightarrow -\infty$, then u satisfies the Holder condition with exponent α.