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We establish a correspondence between  $L_1$ -computable functions and Schnorr tests. Using this correspondence, we prove that a point  $x \in [0, 1]^d$  is Schnorr random if and only if the Lebesgue Differentiation Theorem holds at  $x$  for all  $L_1$ -computable functions. (Received February 22, 2013)