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Kandasamy Muthuvel* (muthuvel@uwosh.edu), Department of Mathematics, University of Wisconsin-Oshkosh, Oshkosh, WI 54901. *Iterations of Darboux Functions.*

In this paper, we study Darboux function f satisfying the property that there exists a continuous function g that is nonconstant on every nonempty open interval and for every real number x, $f^n(x) = g(x)$ for some positive integer n. We recently proved in a paper that if the set of all such n is bounded, then f is continuous. In this talk, we give an example to show that the above conclusion is not true if the condition "the set of all such n is bounded" is dropped. However, if g is the identity function, then f is continuous and, either f is the identity function or $f = f^{-1}$. (Received September 15, 2008)