

A Characterization of Almost Continuity and Weak Continuity

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Abstract

It is well known that a function f from a space X into a space Y is continuous if and only if, for every set K in X the image of the closure of K under f is a subset of the closure of the image of it.

In this paper we characterize almost continuity and weak continuity by proving similar relations for the subsets K of X .

Key words: Almost continuous function, weakly continuous function.

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1 Introduction and notations

The term almost continuous function is defined in different ways by several authors [3, 4, 5, 7]. In this paper we adopt the following definition due to Singal and Singal [7].

Definition 1 *A function $f : X \rightarrow Y$ is said to be almost continuous if for each point $x \in X$ and each open set V in Y containing $f(x)$, there exists an open set U in X containing x , such that $f(U) \subset \overline{V}^0$.*

The following definition of weak continuity is due to N. Levine [2].