SOME NEW RESULTS ON F-CONTRACTIONS IN RECTANGULAR b-METRIC SPACES WITH AN APPLICATION

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Abstract: In the present paper, some new fixed point theorems have been provided for F-contraction on rectangular b-metric spaces in which maps need not be continuous. Especially, we derive common fixed point theorem for two pairs of weakly compatible mappings for new type of F-contraction on rectangular b-metric spaces (not necessarily continuous). Our results not only generalize many known results in the literature, but also improve some of the results therein. In addition, the results are justified by appropriate examples and deployed to examine the existence and uniqueness of solution for a system of Volterra integral equation.

Keywords and Phrases: Fixed point, F-contractions, rectangular b-metric space.

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