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Research Article

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Dislocated quasi cone b-metric space over Banach algebra and contraction principles with application to functional equations

Abstract: In this paper we introduce dislocated and dislocated quasi version of a cone b-metric space over a Banach algebra as well as weak semi α-admissible and α-identical pair of mappings and prove common fixed point theorems for a pair of α-identical and weak α-admissible mappings in the aforesaid spaces. Our results are supported with suitable examples and an application to a system of m-tupled functional equations.

Keywords: common fixed points, dislocated cone b-metric space, dislocated quasi cone b-metric space, weak semi α-admissible pair of mappings, generalised contraction mappings

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