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**Common fixed points of a generalized ordered  $g$ -quasicontraction in partially ordered metric spaces.** (English) Zbl 1286.54048

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Summary: The concept of a generalized ordered  $g$ -quasicontraction is introduced, and some fixed and common fixed point theorems for a  $g$ -nondecreasing generalized ordered  $g$ -quasicontraction mapping in partially ordered complete metric spaces are proved. We also show the uniqueness of the common fixed point in the case of a generalized ordered  $g$ -quasicontraction mapping. Finally, we prove fixed point theorems for mappings satisfying the so-called weak contractive conditions in the setting of a partially ordered metric space. The presented theorems are generalizations of very recent fixed point theorems due to Z. Golubović et al. [Fixed Point Theory Appl. 2012, Article ID 20 (2012; Zbl 1273.54055)].

**MSC:**

[54H25](#) Fixed-point and coincidence theorems (topological aspects)

Cited in **2** Documents

[54E40](#) Special maps on metric spaces

[54E50](#) Complete metric spaces

[54F05](#) Linearly ordered topological spaces, generalized ordered spaces, and partially ordered spaces

**Keywords:**

$G$ -nondecreasing; generalized ordered  $g$ -quasicontraction; coincidence point; common fixed point; comparable mappings

**Full Text:** [DOI](#)

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