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A characterization of cone preserving mappings of quasiordered sets. (English)

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Summary: A cone of a quasiordered set (A, Q) is any $U_Q(a) = \{x \in A : \langle a, x \rangle \in Q\}$. A mapping $f : A \rightarrow B$ is a cone preserving mapping of (A, Q) into (B, Q') if $f(U_Q(a)) = U_{Q'}(f(a))$ for each $a \in A$. We characterize these mappings by using certain relational inclusions. The result can be applied for the construction of a quotient quasiorder hypergroup.

MSC:

[08A02](#) Relational systems, laws of composition

[08A30](#) Subalgebras, congruence relations

[20N20](#) Hypergroups

Cited in **2** Documents

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[quasiorder](#); [quasiorder hypergroup](#); [factorization of quasiordered set](#); [quotient hypergroup](#)