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## A variation on ideal quasi Cauchyness

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**Abstract:** A real valued function  $f$  defined on a subset  $E$  of  $\mathbb{R}$ , the set of real numbers, is ideal upward continuous if it preserves ideal upward half quasi-Cauchy sequences, is ideal downward continuous if it preserves ideal downward half quasi-Cauchy sequences; and a subset  $E$  of  $\mathbb{R}$ , is ideal upward compact if any sequence of points in  $E$  has a ideal upward half quasi-Cauchy subsequence, is ideal downward compact if any sequence of points in  $E$  has a ideal downward half quasi-Cauchy subsequence. We investigate ideal upward continuity, ideal downward continuity, and prove interesting theorems.

**Keywords:** Ideal convergence, ideal upward quasi Cauchyness.

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