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Properties of mappings generated with inequalities for isotonic linear functionals. (English) [Zbl 1464.39023]

Ivanov, Kamen (ed.) et al., Constructive theory of functions. Dedicated to Blagovest Sendov and to the
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Summary: We consider mappings generated by inequalities for isotonic linear functionals such as the
inequalities of Chebyshev, Beckenbach-Dresher, Jensen-Mercer, Jensen, Hölder, Minkowski and their re-
versed versions. Properties like quasilinearity, boundedness and monotonicity are proved. Also, properties
of the composite functional $x \mapsto h(v(x))\Phi\left(\frac{g(x)}{v(x)}\right)$ are mentioned, where $g$ and $v$ are functions associated
with the mappings generated by the inequalities and $\Phi$ is a $h$-concave monotone function.

For the entire collection see [Zbl 1412.41001].

MSC:
39B62 Functional inequalities, including subadditivity, convexity, etc.
26D15 Inequalities for sums, series and integrals
26A51 Convexity of real functions in one variable, generalizations

Keywords:
isotonic linear functional; $h$-concave function; quasilinearity; Chebyshev’s functional; Jensen’s functional