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CONDITIONS FOR THE IRREDUCIBILITY AND PRIMITIVITY OF MONOTONE SUBHOMOGENEOUS MAPPINGS

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We present necessary and sufficient conditions for the local irreducibility of monotone subhomogeneous transformations of the cone $\mathbb{R}^q_+$. The main attention is paid to the notion of irreducibility of a mapping at zero, which is a weakening of the classical notion of irreducibility of a mapping. We analyze the properties of monotone first-degree positively homogeneous mappings irreducible at zero and of subhomogeneous mappings. Necessary and sufficient conditions are obtained for the primitivity of such mappings.

Keywords: first-degree positively homogeneous mapping, subhomogeneous mapping, irreducible mapping, irreducible at zero mapping, primitive mapping.

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