

the \mathbb{R}^n -valued function \mathbf{f} is a solution of the system (1) if and only if \mathbf{f} is a solution of the system (2). The system (2) is called the *normal form* of the system (1). The normal form (2) is a system of n equations in n variables, and the functions \mathbf{g} and \mathbf{h} are assumed to be analytic in a neighborhood of the origin.

The normal form (2) is obtained from the system (1) by a change of variables $\mathbf{y} = \mathbf{X}(\mathbf{x})$, where \mathbf{X} is an analytic function of \mathbf{x} and $\mathbf{X}(0) = 0$.

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