

## characterization of basis of finite dimensional vector space

 ${\bf Canonical\ name} \quad {\bf Characterization Of Basis Of Finite Dimensional Vector Space}$ 

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Entry type Corollary Classification msc 03E20 Let X be a linear space and let  $\phi_i$  be the linear functional,  $\phi_i \colon X \to \mathbb{R}, 1 \leq i \leq n$ , such as  $[\phi_i(v) = 0, \forall i = 1, 2, ..., n] \to [\phi(v) = 0]$ . Then there exist  $\lambda_1, \lambda_2, ..., \lambda_n \in \mathbb{R}$  such as  $\phi = \sum_{i=1}^n \lambda_i \phi_i$ .