This thesis deals with the description of categories of finite-dimensional representations of quivers. Its aim is to present a classification of indecomposable objects in this category for quivers whose underlying graph is Dynkin and to discuss the theory on the example of the so-called three-subspace problem. In the first chapter, the basic concepts of quiver representations are introduced. In the second chapter, the proof itself is demonstrated using reflection functors and reflection transformations. Then, in the third chapter, this thesis deals with the basics for the theory of M. Auslander and I. Reiten. In the conclusion, the Auslander-Reiten quiver is discussed for the category of finite-dimensional representations of the above-mentioned problem of three subspaces.