On some properties of discrete sets

In our talk we represent some properties of discrete sets. Certain problems from combinatorial geometry and the theory of convex sets will be discussed. Namely, theorems connected with the structure of constituents of an independent family of convex sets will be presented. Also, a solution of an infinite version of Sylvester's dual problem will be presented. It will be vividly shown that every of the above-mentioned results demonstrates a certain property of an appropriate discrete set.