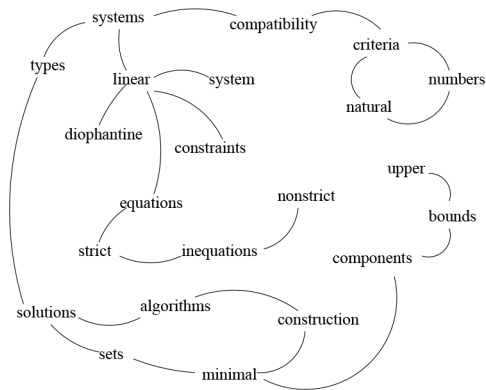


Compatibility of systems of linear constraints over the set of natural numbers. Criteria of compatibility of a system of linear Diophantine equations, strict inequations, and nonstrict inequations are considered. Upper bounds for components of a minimal set of solutions and algorithms of construction of minimal generating sets of solutions for all types of systems are given. These criteria and the corresponding algorithms for constructing a minimal supporting set of solutions can be used in solving all the considered types systems and systems of mixed types.



#### Keywords assigned by TextRank:

linear constraints; linear diophantine equations; natural numbers; nonstrict inequations; strict inequations; upper bounds

#### Keywords assigned by human annotators:

linear constraints; linear diophantine equations; minimal generating sets; non-strict inequations; set of natural numbers; strict inequations; upper bounds