Generalized graphical method of linear programming

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Linear programming (LP) is used for solving all problems that can be represented by a system of linear equations. Graphical method is often limited to LP problems involving two or three decision variables and a limited number of constraints due to the difficulty of the graphical representation, which restricts the use to real-world problems. We develop the extension of the classical graphical method on n decision variables. Therefore, analytical method for n variable case graphical method is introduced, and we prove that obtained solutions of LP problem are optimal. Some details about the implementation of graphical method for solving LP problems in n variables are discussed, and numerical examples are provided to illustrate the introduced algorithm.