

## **An optimality condition for linear programs**

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**Abstract.** Motivated by the well-known graphical method, we give a geometric characterization of optimal linear programs. Our condition and approach rely on the tools of convex analysis. Among the applications, we present the strong duality theorem and revisit Farkas' lemma, as well. Although the auxiliary tools are well-known or follow from highly nontrivial results, we present their (independent) proof in order to keep the paper self-contained.

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