1 Standard Form

The standard form of a linear programming problem is as follows,

$$\min c^T x, \text{ subject to } Ax = b, x \geq 0,$$

where $A \in \mathbb{R}^{mxn}$, c and $x \in \mathbb{R}^{nx1}$ and $b \in \mathbb{R}^{mx1}$. Also, $m \leq n$ and $\text{Rank}(A) = m$. Often, framing a linear programming problem in the standard form is an important task itself.

2 Revised Simplex Algorithm