

SFWR ENG 4003

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Fall 2015

Linear

Linear Program: an optimization problem in which the objective function is linear and each constraint is a linear inequality or equality

Decision variables: describe our choices that are under our control

Objective function: describes a criterion that we wish to max/minimize

Constraints: describe the limitations that restrict our choices for our decision variables, always *inequalities*.

Converting constraints to equalities

Slack variable: equation variable greater than constraint, added

Surplus variable: equation variable less than constraint, subtracted

Hyperplane: a hyperplane in R^x is a shape in R^{x-1} , e.g. line in R^2

Optimal Solution: