

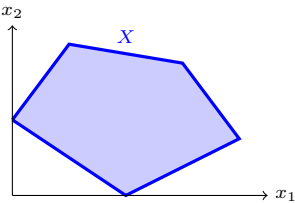
Programowanie matematyczne:

$$\frac{\text{max.}}{\text{min.}} \quad f(\mathbf{x}): \mathbf{x} \in X$$

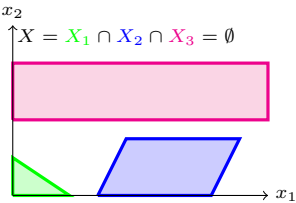
Konwencja zapisu (na podstawie książki *Pióro & Medhi*):

Zamiast	Piszemy (przeważnie skracając)
$\forall_{i \in I} f(x_i) = y_i$	$f(x_i) = y_i \quad i = 1, \dots,  I $
$x_{11} + x_{12} + x_{13} = y_1$	$\sum_{i=1}^3 x_{1i} = y_1 \quad \text{lub} \quad \sum_{i=1}^3 x_{1i} = y_1$
$\begin{cases} x_{11} + x_{12} + x_{13} = y_1 \\ x_{21} + x_{22} + x_{23} = y_2 \end{cases}$	$\sum_{i=1}^3 x_{ji} = y_j \quad j = 1, 2$

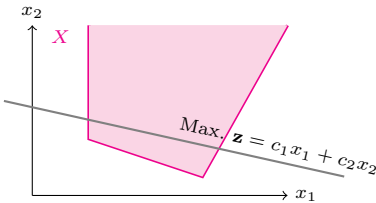
Problem ma rozwiązanie



Problem jest sprzeczny

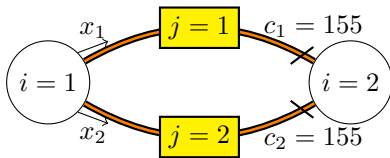


Problem jest nieograniczony



Problem maksymalnego przepływu:

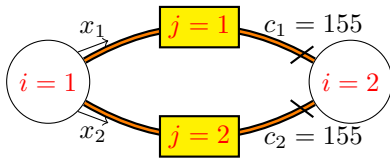
$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$

Indeksy

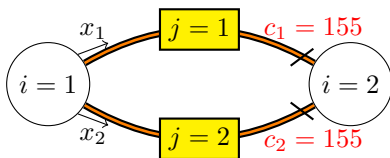
$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$

Stałe

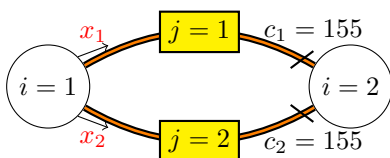
$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$

Zmienne

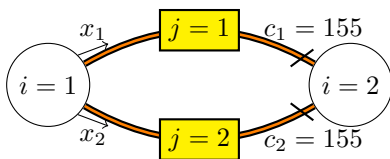
$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$

Funkcja celu

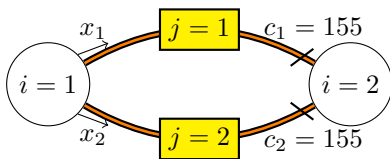
$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$

Ograniczenia

$$\max \sum_j x_j$$



$$x_j \leq c_j \quad j = 1, 2$$