Definitions

nvars = 21

capacity = 3

$[21] \coloneqq \{1, \dots, 21\}$

$S = \{s \subseteq \{1, \dots, 21\} | \sum_{i \in s} 1 = 3, \dots\}$

$\lambda_s = \{0,1\}^{21}$

Master Problem

$$\min Z = \sum_{s \in S} x_s$$

$$\sum_{s \in S} (\lambda_s)_i x_s \geq 1, \quad \forall i \in \{1, \dots, 21\}$$

$$x_s \in \{0,1\}$$

Pricing Problem

$$\max Z = \sum_{i \in [21]} (\lambda_s)_i y_i^*$$

$$\sum_{i \in [21]} (\lambda_s)_i = 3 \tag{1}$$