Atividade 2

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1   Modelo

$$\min \sum_{e \in E} c_e x_e$$

Constraints:

$$\sum_{e \in \delta(v)} x_e = 2 \qquad \forall v \in V$$

$$\sum_{e \in E(S)} x_e \leq |S| - 1 \qquad \forall S \subset V$$

$$x_e \in \{0, 1\} \qquad \forall e \in E$$

1.1   kS

$$\min \sum_{i=1}^{2} \sum_{e \in E} c_e^i x_e^i$$

Constraints:

$$\sum_{e \in \delta(v)} x_e^i = 2 \qquad \forall v \in V, \forall i \in \{1, 2\}$$

$$\sum_{e \in E(S)} x_e^i \leq |S| - 1 \qquad \forall S \subset V, \forall i \in \{1, 2\}$$

$$x_e^i \in \{0, 1\} \qquad \forall e \in E, \forall i \in \{1, 2\}$$

$$\sum_{e \in E} x_e^1 x_e^2 \geq k \qquad \forall e \in E$$