

(d)

Imports 95

$$\text{Minimize } 50x_{11} + 90x_{12} + 70x_{13} \\ + 60x_{21} + 95x_{22} + 50x_{23}$$

$$\text{s.t. } \begin{aligned} x_{11} + x_{12} + x_{13} &= 60 \\ x_{21} + x_{22} + x_{23} &= 50 \\ x_{11} + x_{21} &\leq 60 \\ x_{12} + x_{22} &\leq 45 \\ x_{13} + x_{23} &\leq 30 \\ \text{all } x_{ij} &\geq 0 \end{aligned}$$

Exports

$$\text{Minimize } 150x_{14} + 180x_{15} + 130x_{24} + 200x_{25}$$

$$\text{s.t. } \begin{aligned} x_{14} + x_{24} &\leq 80 \\ x_{15} + x_{25} &\leq 55 \\ x_{14} + x_{15} &= 60 \\ x_{24} + x_{25} &= 50 \\ \text{all } x_{ij} &\geq 0 \end{aligned}$$