

$$\begin{aligned} \text{Min } Z &= 6y_1 + 4y_2 + 2y_3 \\ \text{s/c } \begin{cases} 3y_1 + 6y_2 = 8 \\ 2y_1 - y_2 + y_3 \geq 12 \\ y_1 \geq 0, y_2 \leq 0, y_3 \leq 0 \end{cases} \end{aligned}$$

$$\begin{aligned} \text{Min } Z &= 10y_1 + 14y_2 \\ \text{s/c } \begin{cases} 5y_1 + 2y_2 \geq 3 \\ 6y_1 + 7y_2 = 10 \\ y_1 \leq 0, y_2 \geq 0 \end{cases} \end{aligned}$$

$$\begin{aligned} \text{Max } Z &= -2y_1 + 2y_2 - 5y_3 \\ \text{s/c } \begin{cases} 2y_1 + y_2 - y_3 \geq 2 \\ -y_1 - y_2 + y_3 \leq 1 \\ y_1 \geq 0, y_2 \leq 0, y_3 \leq 0 \end{cases} \end{aligned}$$

$$\begin{aligned} \text{Min } Z &= 6y_1 + 14y_2 + 2y_3 \\ \text{s/c } \begin{cases} 3y_1 + 6y_2 + 3y_3 \leq 10 \\ 2y_1 + y_2 + 3y_3 \geq 30 \\ y_1 \geq 0, y_2 \geq 0, y_3 \leq 0 \end{cases} \end{aligned}$$

$$\begin{aligned} \text{Min } Z &= -4y_1 + 9y_2 + 2y_3 + 2y_4 \\ \text{s/c } \begin{cases} 0.5y_1 + y_2 + 0.3y_3 - 0.5y_4 = 4 \\ y_1 + 3y_2 + y_3 + y_4 \geq 9 \\ 0.3y_1 - y_3 \leq -12 \\ y_1 \leq 0, y_2 \leq 0, y_3 \geq 0, y_4 \leq 0 \end{cases} \end{aligned}$$

$$\begin{aligned} \text{Min } Z &= 4y_1 - 2y_2 + 3y_3 \\ \text{s/c } \begin{cases} -y_1 + 2y_2 + 3y_3 \geq 2 \\ 6y_1 + 5y_2 - 4y_3 \leq -3 \\ -5y_1 + 7y_2 + 2y_3 = 4 \\ y_1 \geq 0, y_2 \leq 0, y_3 \leq 0 \end{cases} \end{aligned}$$