Variables: For $t = 1, \ldots, 6$,
- $\delta_t$ - the decision ($\delta_t = 1$, yes; $\delta_t = 0$, no) to operate plant in month $t$;
- $x_t$ - the number of widgets produced in plant in month $t$;
- $\varepsilon_t$ - the decision ($\varepsilon_t = 1$, yes; $\varepsilon_t = 0$, no) to place an order in month $t$;
- $y_t$ - the number of widgets ordered in month $t$;
- $I_t$ - the number of widgets in stock at the end of month $t$.

Objective:

$$\min 5000 \sum_{t=1}^{6} \delta_t + 25 \sum_{t=1}^{6} x_t + 50 \sum_{t=1}^{6} y_t + 10 \sum_{t=1}^{6} I_t$$

Constraints:

$$\sum_{t=1}^{6} \delta_t \leq 5, \quad \text{(one month needed for maintenance)};$$

$$\sum_{t=1}^{6} \varepsilon_t \leq 3, \quad \text{(at most 3 orders)};$$

$$I_0 = 50, \quad \text{(initial stock)};$$

$$I_t = I_{t-1} + x_t + y_t - \text{demand in month } t, \quad t = 1, \ldots, 6, \quad \text{(stock update)};$$

in particular,

$$I_1 = I_0 + x_1 + y_1 - 200, \quad \text{etc.};$$

$$I_t \leq 150, \quad t = 1, \ldots, 6, \quad \text{(storage capacity)};$$

$$x_t \leq U \delta_t, \quad t = 1, \ldots, 6, \quad \text{(to guarantee that } x_t = 0 \quad \text{if } \delta_t = 0);$$

where $U$ is an upper bound on $x_t$, for example,

$$U = 200 + 300 + 400 + 300 + 500 + 200, \quad \text{(total demand)};$$

$$100 \varepsilon_t \leq y_t \leq U \varepsilon_t, \quad t = 1, \ldots, 6, \quad \text{(minimum order size)};$$

$$I_t \geq 0, \quad t = 1, \ldots, 6, \quad \text{(demand is satisfied in the same month)};$$

$$x_t, y_t \geq 0, \quad t = 1, \ldots, 6;$$

$$\delta_t, \varepsilon_t \quad \text{binary}, \quad t = 1, \ldots, 6.$$