

Soal Latihan VI (Keenam)

1. Maksimumkan $Z = 4x_1 + 3x_2 + 6x_3$

Kendala :

$$\begin{aligned}3x_1 + x_2 + 3x_3 &\leq 30 \\2x_1 + 2x_2 + 3x_3 &\leq 40 \\x_1 \geq 0, x_2 \geq 0, x_3 \geq 0\end{aligned}$$

2. Maksimumkan $Z = 2x_1 - x_2 + x_3$

Kendala :

$$\begin{aligned}3x_1 + x_2 + x_3 &\leq 6 \\x_1 - x_2 + 2x_3 &\leq 1 \\x_2 - x_3 &\leq 2 \\x_1 \geq 0, x_2 \geq 0, x_3 \geq 0\end{aligned}$$

3. Maksimumkan $Z = -x_1 + x_2 + 2x_3$

Kendala :

$$\begin{aligned}x_1 + 2x_2 - x_3 &\leq 20 \\-2x_1 + 4x_2 + 2x_3 &\leq 60 \\2x_1 + 3x_2 + x_3 &\leq 50 \\x_1 \geq 0, x_2 \geq 0, x_3 \geq 0\end{aligned}$$

4. Maksimumkan $Z = 2x_1 - 2x_2 + 3x_3$

Kendala :

$$\begin{aligned}-x_1 + x_2 + x_3 &\leq 4 && (\text{sumberdaya 1}) \\2x_1 - x_2 + x_3 &\leq 2 && (\text{sumberdaya 2}) \\x_1 + x_2 + 3x_3 &\leq 12 && (\text{sumberdaya 3}) \\x_1 \geq 0, x_2 \geq 0, x_3 \geq 0\end{aligned}$$

Soal:

- Selesaikan dengan metode simpleks