

$$\begin{aligned}
 C. J_{\min} &= J(2.833) = 7.5(2.833)^2 + (-42.5)(2.833) + 65 \\
 &= 60.1941 - 120.4025 + 65 \\
 &= 4.7916
 \end{aligned}$$

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2.

Wilayah Pembangkit	Wilayah		Kapasitas max	Biaya Operasional
	I	II		
A	x_1	x_2	1000	
B	-	$1500 - x_2$	1100	
C	$1750 - x_1$	-	1200	
Beban puncak	1750	1500		

a. Fungsi biaya

$$\begin{aligned}
 f(x) &= C^T x + R \\
 &= 600x_1 + 500x_2 + 800(1750 - x_1) \\
 &\quad + 700(1500 - x_2) \\
 &= 600x_1 + 500x_2 + 1400000 - 800x_1 \\
 &\quad + 1050000 - 700x_2 \\
 &= -200x_1 - 200x_2 + 2450000
 \end{aligned}$$

Wilayah Pembangkit	Biaya Operasional	
	I	II
A	600	500
B	-	700
C	800	-

b. Fungsi kendala

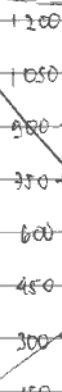
$$\begin{aligned}
 x_1 + x_2 &\leq 1000 \\
 1500 - x_2 &\leq 1100 &\Rightarrow -x_2 &\leq -400 &\Rightarrow x_2 &\geq 400 \\
 1750 - x_1 &\leq 1200 &\Rightarrow -x_1 &\leq -550 &\Rightarrow x_1 &\geq 550
 \end{aligned}$$

c. Bentuk standar $Ax \leq B$

$$\begin{bmatrix} 1 & 1 \\ 0 & -1 \\ -1 & 0 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} \leq \begin{bmatrix} 1000 \\ -400 \\ -550 \end{bmatrix}$$

$$\begin{pmatrix} 1750 - x_1 \geq 1200 \\ 1500 - x_2 \geq 1100 \end{pmatrix}$$

d.



08

06

07

09