

$$9a + 2b + c = 10$$

$$1(7,5) + 2(27,5) + c = 10$$

$$c = 10 - 1(7,5) - 2(27,5)$$

$$= 10 - 30 + 85$$

$$= 65$$

10

$$D. J(x) = 7,5x^2 - 42,5x + 65$$

$$x = \frac{-b}{a} = \frac{-(-42,5)}{7,5} = 5,66$$

03

$$C. J(x) = 7,5x^2 - 42,5x + 65$$

$$J(5,66) = 7,5(5,66)^2 - 42,5(5,66) + 65$$

$$= 7,5(32,111) - 42,5(5,66) + 65$$

$$= 240,83 - 240,83 + 65$$

$$= 65$$

04

2. Daya yang didistribusikan 3 pembangkit

| Pembangkit | I            | II           | maximal | <del>6000</del><br>Bekas penerak |
|------------|--------------|--------------|---------|----------------------------------|
| A          | $x_1$        | $x_2$        | 1000    | I = 1750                         |
| B          | -            | $1500 - x_2$ | 1100    | II = 1500                        |
| C          | $1750 - x_1$ |              | 1200    |                                  |

a. Fungsi biaya

$$J(x) = CT + R$$

$$= 600x_1 + 500x_2 + 800(1750 - x_1) + 700(1500 - x_2)$$

$$= 600x_1 + 500x_2 + 1400.000 - 800x_1 + 1050.000 - 700x_2$$

$$J(x) = -200x_1 - 200x_2 + 2450.000$$

07

07

b. Fungsi kendala

$$x_1 + x_2 \leq 1000$$

$$1500 - x_2 \leq 1100 \Rightarrow x_2 \geq 400$$

$$-x_1 + 1750 \leq 1200 \Rightarrow x_1 \geq 550$$

1750 - 1200 = 550  
1500 - 1100 = 400

06

$$c. Ax \leq B \Rightarrow$$

$$\begin{bmatrix} 1 & 1 \\ 0 & -1 \\ -1 & 0 \\ 1 & 0 \\ 0 & 1 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} \leq \begin{bmatrix} 1000 \\ -400 \\ -550 \\ 1750 \\ 1500 \end{bmatrix}$$

X

08