

Kuis TVM

Gornain Aji

21/48/267/TK/53170

Goal

$x = \text{fahn}$

$y = \text{siomay}$

$z = \text{kentang}$

Pesanan:

$$2x + 3y = 40000$$

$$x + 2y + 2z = 40000$$

$$x + 2y + z = 32500$$

a. Eliminyi Gauss

Bentuk matriks

$$\begin{bmatrix} 2 & 3 & 0 \\ 1 & 2 & 2 \\ 1 & 2 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 40000 \\ 40000 \\ 32500 \end{bmatrix}$$

Eliminyi Gauss

$$\begin{bmatrix} 2 & 3 & 0 & | & 40000 \\ 1 & 2 & 2 & | & 40000 \\ 1 & 2 & 1 & | & 32500 \end{bmatrix}$$

$$E_{21} = \begin{bmatrix} 1 & 0 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 3 & 0 & | & 40000 \\ 0 & 1/2 & 2 & | & 20000 \\ 1 & 2 & 1 & | & 32500 \end{bmatrix}$$

$$E_{31} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ -1 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 3 & 0 & | & 40000 \\ 0 & 1/2 & 2 & | & 20000 \\ 0 & 1/2 & 1 & | & 12500 \end{bmatrix}$$

$$E_{32} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1/2 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 3 & 0 & | & 40000 \\ 0 & 1/2 & 2 & | & 20000 \\ 0 & 0 & -1 & | & 7500 \end{bmatrix}$$

$$z = 7500$$

$$\frac{1}{2}y + 2z = 20000$$

$$\frac{1}{2}y + 15000 = 20000$$

$$y = 10000$$

$$2x + 30000 = 40000$$

$$2y = 10000$$

$$2y = 5000$$

$$\text{fahn} = \text{Rp } 5000$$

$$\text{kentang} = \text{Rp } 7500$$

$$\text{siomay} = \text{Rp } 10000$$

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maaf pak belum selesai