

ULANGAN HARIAN 2

BAGIAN 1

Diketahui matriks $A = \begin{pmatrix} 2 & 3 \\ -1 & 0 \end{pmatrix}$, $B = \begin{pmatrix} -3 & 0 \\ 4 & 2 \end{pmatrix}$, $C = \begin{pmatrix} 1 & 5 \\ 0 & -3 \\ -2 & 2 \end{pmatrix}$ dan $D = \begin{pmatrix} 2 & 2 & 0 \\ 0 & 5 & -3 \\ -1 & 3 & 4 \end{pmatrix}$ tentukan operasi Matriks berikut :

- $3A - B$
- $C \times A$

Jawab :

$$\begin{aligned} \text{a. } 3A - B &= \dots \begin{pmatrix} 2 & 3 \\ -1 & 0 \end{pmatrix} - \begin{pmatrix} -3 & 0 \\ 4 & 2 \end{pmatrix} \\ &= \begin{pmatrix} \dots \times \dots & \dots \times \dots \\ \dots \times \dots & \dots \times \dots \end{pmatrix} - \begin{pmatrix} & \\ & \end{pmatrix} \\ &= \begin{pmatrix} & \\ & \end{pmatrix} - \begin{pmatrix} & \\ & \end{pmatrix} \\ &= \begin{pmatrix} & \\ & \end{pmatrix} \end{aligned}$$

$$\begin{aligned} \text{b. } C \times A &= \begin{pmatrix} 1 & 5 \\ 0 & -3 \\ -2 & 2 \end{pmatrix} \times \begin{pmatrix} 2 & 3 \\ -1 & 0 \end{pmatrix}, \\ &= \begin{pmatrix} \dots \times \dots + \dots \times \dots & \dots \times \dots + \dots \times \dots \\ \dots \times \dots + \dots \times \dots & \dots \times \dots + \dots \times \dots \\ \dots \times \dots + \dots \times \dots & \dots \times \dots + \dots \times \dots \end{pmatrix} \\ &= \begin{pmatrix} \dots + \dots & \dots + \dots \\ \dots + \dots & \dots + \dots \\ \dots + \dots & \dots + \dots \end{pmatrix} \\ &= \begin{pmatrix} & \\ & \\ & \end{pmatrix} \end{aligned}$$

Bagian 2

Diketahui $P = \begin{pmatrix} 6 & -2 \\ 4 & 10 \end{pmatrix}$, maka tentukan nilai dari :

a. $2P = 2 \begin{pmatrix} 6 & -2 \\ 4 & 10 \end{pmatrix} = \begin{pmatrix} 2 \times 6 & \square \\ \square & \square \end{pmatrix} = \begin{pmatrix} \square & \square \\ \square & \square \end{pmatrix}$

b. $\frac{1}{2}P = \frac{\square}{\square} \begin{pmatrix} \square & -2 \\ \square & \square \end{pmatrix} = \begin{pmatrix} \square & \square \\ \square & 1/2 \times 10 \end{pmatrix} = \begin{pmatrix} \square & \square \\ \square & 5 \end{pmatrix}$

Bagian 3

Tentukan hasil perkalian matriks berikut !

a. $\begin{bmatrix} 1 & 3 \\ 4 & 7 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \end{bmatrix} =$

$$\begin{bmatrix} \square \times 2 + 3 \times 4 \\ 4 \times \square + 7 \times \square \end{bmatrix} = \begin{bmatrix} \square + 12 \\ \square + \square \end{bmatrix} = \begin{bmatrix} \square \\ \square \end{bmatrix}$$

b. $\begin{bmatrix} 4 & 1 \\ -2 & 3 \end{bmatrix} \begin{bmatrix} 2 & 3 \\ 1 & -1 \end{bmatrix} = \begin{bmatrix} 4 \times 2 + 1 \times 1 & \square \times 3 + \square \times (\square) \\ -2 \times \square + \square \times \square & \square \times \square + \square \times (-1) \end{bmatrix}$

$$= \begin{bmatrix} \square + \square & \square + \square \\ \square + \square & \square + \square \end{bmatrix} = \begin{bmatrix} \square & \square \\ \square & \square \end{bmatrix}$$