

TUGAS 1

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NIM :

1. **(Skor 10)** Jika diketahui $B = \begin{pmatrix} -3 & 9 \\ 8 & -1 \end{pmatrix}$. Hitung nilai matriks $8B$!

$$8B = \begin{pmatrix} -24 & 72 \\ 64 & -8 \end{pmatrix}$$

.....
(1)

2. **(Skor 10)** Jika diketahui $C = \begin{pmatrix} -3 & 5 \\ -2 & -8 \end{pmatrix}$ dan $D = \begin{pmatrix} 9 \\ -4 \end{pmatrix}$. Hitung nilai matriks CD !

$$\begin{pmatrix} -3 & 5 \\ -2 & -8 \end{pmatrix} \cdot \begin{pmatrix} 9 \\ -4 \end{pmatrix}$$

$$\begin{pmatrix} -47 \\ 14 \end{pmatrix}$$

.....
(2)

3. **(Skor 20)** Jika diketahui $C = \begin{pmatrix} 4 & -2 \\ -1 & 5 \end{pmatrix}$ dan $D = \begin{pmatrix} -7 & 0 \\ 2 & 6 \end{pmatrix}$. Hitung nilai matriks CD !

$$\begin{pmatrix} 4 & -2 \\ -1 & 5 \end{pmatrix} \cdot \begin{pmatrix} -7 & 0 \\ 2 & 6 \end{pmatrix}$$

$$\begin{pmatrix} -32 & -12 \\ 17 & 30 \end{pmatrix}$$

.....
(3)

4. **(Skor 10)** Jika diketahui $M = \begin{pmatrix} -3 & 1 \\ -2 & -4 \end{pmatrix}$. Hitung nilai matriks M^2 !

$$\begin{pmatrix} 9 & 1 \\ 4 & 16 \end{pmatrix}$$

(4)

5. **(Skor 20)** Jika diketahui $4 \begin{pmatrix} 6 & -c \\ d & 9 \end{pmatrix} = c \begin{pmatrix} -2 \\ 9 \end{pmatrix}$. Tentukan nilai c dan d !

$$\begin{aligned} 6 - c &= -2 \\ -c &= -8 \\ c &= 8 \end{aligned}$$

$$c = 8$$

$$d = 9$$

(5)

6. **(Skor 30)** Jika diketahui $\begin{pmatrix} 5 & 1 \\ -3 & 2 \end{pmatrix} \begin{pmatrix} c \\ d \end{pmatrix} = \begin{pmatrix} d+6 \\ -4c-4d \end{pmatrix}$. Tentukan nilai c dan d serta $2c - d$!

$$\begin{pmatrix} 5c + d \\ -3c + 2d \end{pmatrix} = \begin{pmatrix} d + 6 \\ -4c - 4d \end{pmatrix}$$

$$\begin{aligned} 2 \left(\frac{6}{5} \right) - \left(-\frac{1}{5} \right) \\ = \frac{12}{5} + \frac{1}{5} = \frac{13}{5} \end{aligned}$$

$$c = \frac{6}{5}$$

$$d = -\frac{1}{5}$$

$$2c - d = \frac{13}{5}$$

(6)