

Soal latihan:

1. Tinjaulah matriks-matriks berikut:

$$A = \begin{bmatrix} 3 & 0 \\ -1 & 2 \\ 1 & 1 \end{bmatrix} \quad B = \begin{bmatrix} 4 & -1 \\ 0 & 2 \end{bmatrix} \quad C = \begin{bmatrix} 1 & 4 & 2 \\ 3 & 1 & 5 \end{bmatrix} \quad D = \begin{bmatrix} 1 & 5 & 2 \\ -1 & 0 & 1 \\ 3 & 2 & 4 \end{bmatrix} \quad E = \begin{bmatrix} 6 & 1 & 3 \\ -1 & 1 & 2 \\ 4 & 1 & 3 \end{bmatrix}$$

Hitunglah:

- | | |
|------------|-----------------------------------|
| a. $D + E$ | e. $-7B$ |
| b. AB | f. ED |
| c. $D - E$ | g. $3D - 2E$ |
| d. $A(BC)$ | h. $D + E^2$ (dimana $E^2 = EE$) |

$$2. \text{ Misal: } A = \begin{bmatrix} 2 & -1 & 0 \\ 7 & 3 & 9 \\ 3 & 4 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 2 & 4 & 5 \\ 0 & 1 & 0 \\ 4 & 3 & 6 \end{bmatrix} \quad C = \begin{bmatrix} 1 & 8 \\ 0 & 7 \\ -2 & 5 \end{bmatrix}$$

hitunglah:

- | | |
|-------------|----------------|
| a. A^t | d. $(A + B)^t$ |
| b. C^t | e. AC |
| c. $(AB)^t$ | |

3. Tentukan nilai a,b,c dan d berikut

$$\begin{bmatrix} a-b & b+c \\ 3d+c & 2a-4d \end{bmatrix} = \begin{bmatrix} 8 & 1 \\ 7 & 6 \end{bmatrix}$$

$$4. \text{ misalkan } A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}, B = \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \\ b_{31} & b_{32} & b_{33} \end{bmatrix}$$

tunjukkan bahwa:

a. $(A^t)^t = A$

c. $(AB)^t = B^t A^t$

b. $(A + B)^t = A^t + B^t$

d. $(kA)^t = kA^t$