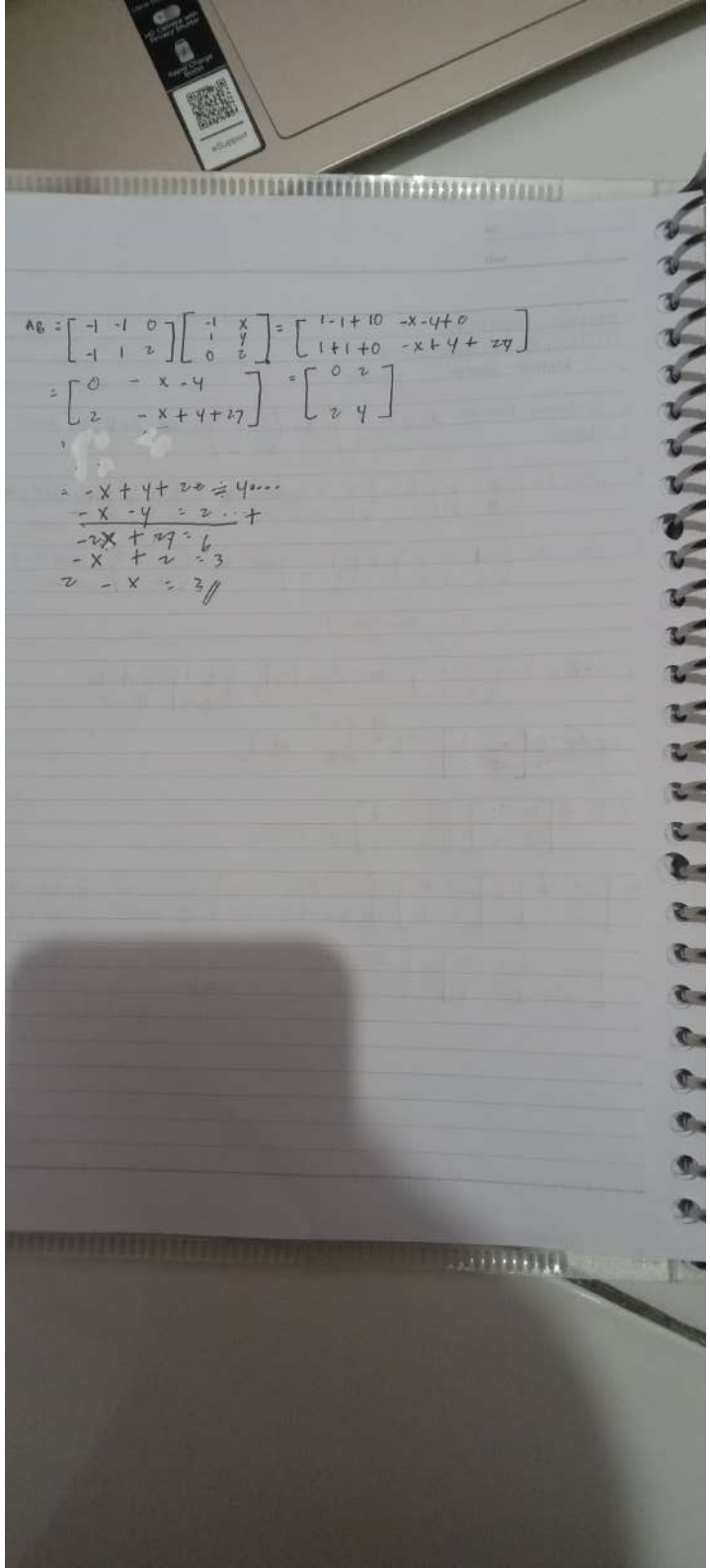

Matkul : Matkom
M. Rizal Fauzi - 0140223046

Jawaban

1. Di ketahui Matriks $A = \begin{pmatrix} 3 & 0 \\ 3 & 0 \end{pmatrix}$ $B = \begin{pmatrix} 2 & 1 \\ 3 & 2 \end{pmatrix}$; dan $A+B = C$. Invers C adalah ...

2. Jika $A = \begin{pmatrix} a & 1 \\ b & 2 \end{pmatrix}$ $B = \begin{pmatrix} a & 1 \\ 1 & 0 \end{pmatrix}$ dan $AB = \begin{pmatrix} 10 & a \\ 4 & b \end{pmatrix}$ Maka Nilai ab adalah ...

3. Jika $A = \begin{pmatrix} -1 & -1 & 0 \\ -1 & 1 & 2 \end{pmatrix}$ $B = \begin{pmatrix} -1 & x \\ 1 & 4 \\ 0 & z \end{pmatrix}$ dan $AB = \begin{pmatrix} 0 & 2 \\ 2 & 4 \end{pmatrix}$. Maka nilai $z - x$ adalah ...

Jawaban !

1. $A+B = C = \begin{pmatrix} 5 & 1 \\ 5 & 2 \end{pmatrix}$ dan $C = |C| = \begin{vmatrix} 5 & 1 \\ 5 & 2 \end{vmatrix}$ $a \cdot d - bc$ $10 - 5$

$\det C = 5$

$C^{-1} = \frac{1}{\det C}$ Adj C

$C^{-1} = \frac{1}{5}\begin{bmatrix} 2 & -1 \\ -5 & 5 \end{bmatrix} = \begin{bmatrix} \frac{2}{5} & -\frac{1}{5} \\ -1 & 1 \end{bmatrix}$ //

2. $\begin{bmatrix} a & 1 \\ b & 2 \end{bmatrix} \times \begin{bmatrix} a & 1 \\ 1 & 0 \end{bmatrix} = \begin{bmatrix} a^2+1 & a \\ ba+2 & b \end{bmatrix}$

$\begin{bmatrix} a^2+1 & a \\ ba+2 & b \end{bmatrix} = \begin{bmatrix} 10 & a \\ 14 & b \end{bmatrix}$

$10 = a^2 + 1$ $ba + 2 = 14$
$10 - 1 = a^2$ $3b + 2 = 14$
$9 = a^2$ $3b = 14 - 2$
$3 = a$ $3b = 12$
$b = 4$

$a \times b = 3 \times 4 = 12$ //