

Invers dari matriks A adalah

$$A = \begin{pmatrix} 2 & 0 & 1 \\ 3 & 1 & 2 \\ 4 & 2 & 3 \end{pmatrix}$$

$$\text{Invers } A = \frac{1}{\det A} \text{adjoin } A$$

$$\det A = \begin{vmatrix} 2 & 0 & 1 \\ 3 & 1 & 2 \\ 4 & 2 & 3 \end{vmatrix} = 6 + 0 + 6 - 4 - 8 - 0 = 12 - 12 = 0$$

Langkah ke -2.

$$A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix} = \begin{bmatrix} 1 & 2 \\ 2 & 3 \\ 3 & 2 \\ 4 & 3 \\ 3 & 1 \\ 4 & 2 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ 2 & 3 \\ 2 & 1 \\ 4 & 3 \\ 2 & 0 \\ 4 & 2 \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ 1 & 2 \\ 2 & 1 \\ 3 & 2 \\ 2 & 0 \\ 3 & 1 \end{bmatrix}$$

$$\begin{bmatrix} (1 \times 3 - (2 \times 2)) & -((0 \times 3) - (2 \times 1)) & (0 \times 2 - (1 \times 1)) \\ (3 \times 3 - (4 \times 2)) & (2 \times 3 - (4 \times 1)) & -(2 \times 2 - (3 \times 1)) \\ (3 \times 2 - (4 \times 1)) & -(2 \times 2 - (4 \times 0)) & (2 \times 1 - (3 \times 0)) \end{bmatrix}$$

$$= \begin{bmatrix} 3-4 & -(0-2) & 0-1 \\ (9-8) & 6-4 & -(4-3) \\ 6-4 & -(4-0) & 2-0 \end{bmatrix} = \begin{bmatrix} -1 & 2 & -1 \\ 1 & 2 & -1 \\ 2 & -4 & 2 \end{bmatrix}$$

determinan $A = 0$

$$\text{adjoin } A \begin{bmatrix} -1 & 2 & -1 \\ 1 & 2 & -1 \\ 2 & 4 & 2 \end{bmatrix}$$

! Karena determinan $A = 0$, maka invers dari matriks A adalah

$$\begin{bmatrix} -1 & 2 & -1 \\ 1 & 2 & -1 \\ 2 & 4 & 2 \end{bmatrix}$$