

1)

a)
$$\begin{bmatrix} a & 0 & -1 & 2 \\ 4 & 1 & 2 & d \\ f & b & e & -1 \\ c & -3 & 0 & 3 \end{bmatrix}$$

NIM: 120140018
 $a=1 \quad b=4 \quad c=0$
 $d=0 \quad e=1 \quad f=8$

$$\begin{bmatrix} 1 & 0 & -1 & 2 \\ 4 & 1 & 2 & 0 \\ 8 & 4 & 1 & -1 \\ 0 & -3 & 0 & 3 \end{bmatrix}$$

b) baris 1 kolom 1

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

baris 1 kolom 2

$$\begin{bmatrix} 4 & 2 & 0 \\ 8 & 1 & -1 \\ 0 & 0 & 3 \end{bmatrix} \rightarrow (4)(1)(3) - (0)(1)(6) = 12$$

baris 1 kolom 3

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

baris 1 kolom 4

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

baris 2 kolom 1

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

baris 2 kolom 2

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

baris 2 kolom 3

$$\begin{bmatrix} 1 & 0 & 2 \\ 4 & 4 & -1 \\ 0 & -3 & 3 \end{bmatrix} \rightarrow (1)(4)(3) - (2)(4)(6) = 12$$

baris 2 kolom 4

$$\begin{bmatrix} 1 & 0 & -1 \\ 8 & 4 & 1 \\ 0 & -3 & 0 \end{bmatrix} \rightarrow (1)(4)(6) - (-1)(4)(0) = 24$$

la

$$c) C_1 = \begin{bmatrix} 1 & 2 & 0 \\ 4 & 1 & -1 \\ -3 & 0 & 3 \end{bmatrix}$$

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

$$R_1 \rightarrow R_1 - 4R_2$$

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

$$f(x) = (x-1)f'(x) - (x)f'(x) +$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$H = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$G = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$D = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$C = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$B = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$A = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

$$F = f(x)f'(x) - f(x)f'(x) =$$

$$\begin{pmatrix} 0 & 2 & 1 \\ 2 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

e)
$$\begin{bmatrix} -\frac{1}{2} & -\frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\ \frac{4}{5} & \frac{3}{5} & \frac{2}{5} & -\frac{2}{5} \\ \frac{4}{5} & -\frac{3}{5} & -\frac{2}{5} & -\frac{2}{5} \\ \frac{4}{5} & \frac{3}{5} & -\frac{2}{5} & -\frac{2}{5} \end{bmatrix}$$