Bilet № 1

1) $A=\begin{pmatrix}3 & 1 & 3\\ 2 & 8 & -2\\ 1 & 2 & 3\end{pmatrix}$ $A^{-1}=?$

2) $\begin{vmatrix}3 & 6 & -4\\ 2 & -1 & 7\\ 5 & 5 & 8\end{vmatrix}=?$

3) Tenglamalar sistemasining Gauss formulasidan foydalanib yeching.

$$\begin{cases}2x_1-x_2-x_3=4\\ 3x_1+4x_2-2x_3=11\\ 3x_1-2x_2+4x_3=11\end{cases}$$

Bilet № 2

1) $A=\begin{pmatrix}3 & 5 & -1\\ 6 & 11 & 2\\ 8 & -2 & 3\end{pmatrix}*\begin{pmatrix}1 & 3 & -1\\ 2 & -1 & 1\\ 1 & 4 & 5\end{pmatrix}$ $A^{-1}=?$

2) $A=\begin{pmatrix}9 & 6 & -4\\ 7 & -1 & 3\\ 5 & -2 & 8\end{pmatrix}$ A matritsani rangini toping.

3) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases}x_1+x_2+2x_3=-1\\ 2x_1-x_2+2x_3=-4\\ 4x_1+x_2+4x_3=-2\end{cases}$$

Bilet № 3

1) $A=\begin{pmatrix}3 & 5 & -1\\ 6 & 11 & 2\\ 8 & -2 & 3\end{pmatrix}+\begin{pmatrix}1 & 3 & -1\\ 2 & -1 & 1\\ 1 & 4 & 5\end{pmatrix}$ $A^{-1}=?$

2) $\begin{vmatrix}5 & 2 & 5 & 6\\ 7 & 1 & 3 & 5\\ 3 & 6 & 2 & 7\\ -2 & -2 & 9 & 11\end{vmatrix}=?$ determinantni hisoblang.

3) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases}2x_1+3x_2+4x_3=9\\ x_2+11x_3=1\\ 7x_1-5x_2=-1\end{cases}$$

Bilet № 4

1) $\begin{vmatrix} 5 & 3 & 4 & 1 \\ -3 & 2 & 1 & 3 \\ 6 & 1 & 2 & 0 \\ 2 & 3 & 0 & 1 \end{vmatrix} = ?$ determinantni hisoblang.

2) $A = \begin{pmatrix} 3 & 5 & -1 \\ 6 & 11 & 2 \\ 8 & -2 & 3 \end{pmatrix} * \begin{pmatrix} 5 & 6 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1} = ?$

3) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 - x_2 + 5x_3 = 27 \\ 5x_1 + 2x_2 + 13x_3 = 70 \\ 3x_1 - x_3 = -2 \end{cases}$$

Bilet № 5

1) $\begin{vmatrix} 4 & 3 & 8 \\ 6 & 9 & 1 \\ 2 & 1 & 8 \end{vmatrix} = ?$ determinantni hisoblang.

2) $A = \begin{pmatrix} 3 & 5 & -1 \\ 6 & 11 & 2 \\ 8 & -2 & 3 \end{pmatrix} - \begin{pmatrix} 5 & 6 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ A matritsani rangini toping.

3) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 - x_2 + 3x_3 = 46 \\ x_1 + 2x_2 + x_3 = 8 \\ x_1 - 7x_2 - 2x_3 = 5 \end{cases}$$

Bilet № 6

1) $\begin{vmatrix} 5 & 2 & 5 & -6 \\ -4 & 1 & 0 & 5 \\ 3 & 6 & 2 & 7 \\ -2 & -2 & -9 & 11 \end{vmatrix} = ?$ determinantni hisoblang.

2) $A = \begin{pmatrix} 4 & 3 & 8 \\ 6 & 9 & 1 \\ 2 & 1 & 8 \end{pmatrix} * \begin{pmatrix} 5 & 6 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1} = ?$

3) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 4x_1 + x_2 - 3x_3 = -1 \\ 8x_1 + 3x_2 - 6x_3 = -1 \\ x_1 + x_2 - x_3 = -1 \end{cases}$$

Bilet № 7

1) $\begin{vmatrix} 4 & 5 & -3 & -5 \\ 1 & -1 & -1 & 3 \\ 7 & 0 & 4 & 1 \\ 2 & 3 & 2 & 8 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} x_1 - 4x_2 - 2x_3 = 0 \\ 3x_1 - 5x_2 - 6x_3 = 21 \\ 3x_1 + x_2 + x_3 = -4 \end{cases}$$

3) $A = \begin{pmatrix} 3 & 5 & -1 \\ 6 & 11 & 2 \\ 8 & -2 & 3 \end{pmatrix} * \begin{pmatrix} 1 & 3 & -1 \\ 2 & -1 & 1 \\ 1 & 4 & 5 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 8

1) $\begin{vmatrix} 4 & 5 & -3 & -5 \\ 2 & -7 & -1 & 3 \\ 7 & 2 & -2 & 1 \\ 2 & 3 & 2 & 8 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 4x_1 + 3x_2 + x_3 = 43 \\ x_1 + x_2 - x_3 = 3 \\ 2x_1 + x_2 = 13 \end{cases}$$

4) . $A = \begin{pmatrix} 3 & 5 & -1 \\ 6 & 3 & 2 \\ 8 & -2 & 0 \end{pmatrix} * \begin{pmatrix} 1 & 3 & -1 \\ 2 & -1 & 2 \\ 1 & 2 & 5 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 9

1) $\begin{vmatrix} 4 & 3 & -3 & -5 \\ 6 & 7 & -1 & 3 \\ 9 & 1 & 7 & 1 \\ 2 & 0 & -2 & 8 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 + x_2 - 2x_3 = 6 \\ 5x_1 - 3x_2 + 2x_3 = -4 \\ 4x_1 - 2x_2 - 3x_3 = -2 \end{cases}$$

3) $A = \begin{pmatrix} 3 & 5 & -1 \\ 6 & 3 & 2 \\ 8 & -2 & 0 \end{pmatrix}$ $A^{-1} = ?$.

Bilet № 10

1) $\begin{vmatrix} 2 & 1 & 0 & 5 \\ 7 & -2 & 3 & 8 \\ 5 & 0 & 1 & 9 \\ -2 & 3 & 5 & 10 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 + x_2 + 2x_3 = 11 \\ 2x_1 + 2x_2 - 3x_3 = 9 \\ x_1 - 5x_2 - 8x_3 = 23 \end{cases}$$

3) $\begin{pmatrix} 2 & 1 & 0 \\ 7 & -2 & 3 \\ 5 & 0 & 1 \end{pmatrix} * \begin{pmatrix} 3 & 1 & 2 \\ 2 & 2 & -3 \\ 1 & -5 & -8 \end{pmatrix} = ?$ $A^{-1} = ?$

Bilet № 11

1) $\begin{vmatrix} 2 & 1 & 7 & 5 \\ 7 & -2 & 3 & 8 \\ 5 & 4 & 1 & -9 \\ -2 & 3 & 5 & 10 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 5x_1 + 6x_2 - 2x_3 = 12 \\ 2x_1 + 5x_2 - 3x_3 = 9 \\ 4x_1 - 3x_2 + 2x_3 = -15 \end{cases}$$

3) $\begin{pmatrix} 2 & -1 & 4 \\ 3 & 2 & -5 \\ 1 & 1 & -2 \end{pmatrix} * \begin{pmatrix} 5 & 6 & -2 \\ 2 & 5 & -3 \\ 4 & -3 & 2 \end{pmatrix} = ?$ $A^{-1} = ?$

Bilet № 12

1) $\begin{vmatrix} 1 & -8 & 7 \\ 2 & 5 & -3 \\ 3 & -3 & 4 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 + 3x_2 + 4x_3 = 15 \\ x_1 + x_2 + 5x_3 = 16 \\ 3x_1 - 2x_2 + x_3 = 1 \end{cases}$$

3) $A = \begin{pmatrix} 2 & -1 & 4 \\ 3 & 2 & -5 \\ 1 & 1 & -2 \end{pmatrix} * \begin{pmatrix} 1 & -8 & 7 \\ 2 & 5 & -3 \\ 3 & -3 & 4 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 13

1) $\begin{vmatrix} 4 & 3 & 2 \\ -2 & 1 & -1 \\ 3 & 1 & 1 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 - 3x_2 + x_3 = 11 \\ x_1 + 2x_2 - x_3 = -6 \\ x_1 - 4x_2 - 2x_3 = 3 \end{cases}$$

3) $A = \begin{pmatrix} 2 & -1 & 4 \\ 3 & 2 & -5 \\ 1 & 1 & -2 \end{pmatrix} + \begin{pmatrix} 5 & 6 & -2 \\ 2 & 5 & -3 \\ 4 & -3 & 2 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 14

1) $\begin{vmatrix} 1 & -2 & -1 \\ 3 & 1 & 2 \\ 1 & 2 & 2 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 - 5x_2 = 19 \\ 3x_1 + 5x_2 - x_3 = -10 \\ x_1 - 4x_2 + 2x_3 = 16 \end{cases}$$

3) $A = \begin{pmatrix} 4 & 3 & 1 \\ 3 & 2 & 1 \\ 1 & -2 & 1 \end{pmatrix} - \begin{pmatrix} 1 & -3 & 4 \\ 4 & -7 & 8 \\ 6 & -7 & 7 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 15

1) $A = \begin{pmatrix} 4 & -1 & -3 \\ -5 & 5 & 4 \\ 2 & 1 & 6 \end{pmatrix}$ A matritsani rangini toping.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 + x_2 - 2x_3 = 6 \\ 2x_2 + x_3 = 0 \\ 4x_1 - 3x_2 + 5x_3 = 9 \end{cases}$$

3) $A = \begin{pmatrix} 4 & 3 & 1 \\ 3 & 2 & 1 \\ 1 & -2 & 1 \end{pmatrix} * \begin{pmatrix} 1 & -8 & 7 \\ 2 & 5 & -3 \\ 3 & -3 & 4 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 16

1) $\begin{vmatrix} 1 & -3 & 4 \\ 4 & -7 & 8 \\ 6 & -7 & 7 \end{vmatrix} = ?$ A matritsani rangini toping.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 - 3x_2 - 2x_3 = 16 \\ 3x_1 + 4x_2 - 5x_3 = -10 \\ 2x_1 - 3x_3 = 4 \end{cases}$$

3) $A = \begin{pmatrix} 4 & 3 & 1 \\ 3 & 2 & 1 \\ 1 & -2 & 1 \end{pmatrix} * \begin{pmatrix} 1 & -3 & 4 \\ 4 & -7 & 8 \\ 6 & -7 & 7 \end{pmatrix} \quad A^{-1} = ?$

Bilet № 17

1) $\begin{vmatrix} 7 & -12 & 6 \\ 10 & -19 & 10 \\ 12 & -24 & 13 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 6x_1 + x_2 + x_3 = 1 \\ x_2 - 3x_3 = 14 \\ 3x_1 + 3x_2 - 4x_3 = 31 \end{cases}$$

3) $\begin{pmatrix} 7 & -12 & 6 \\ 10 & -19 & 10 \\ 12 & -24 & 13 \end{pmatrix} * \begin{pmatrix} 1 & -3 & 4 \\ 4 & -7 & 8 \\ 6 & -7 & 7 \end{pmatrix} = ? \quad A^{-1} = ?$

Bilet № 18

1) $\begin{vmatrix} 2 & 1 & -4 & -7 \\ 5 & -1 & 2 & 6 \\ 1 & 2 & 8 & 3 \\ -6 & 5 & -2 & 2 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 + 5x_2 - x_3 = 20 \\ x_1 - x_2 = 2 \\ 4x_1 - x_2 = -2 \end{cases}$$

3) $A = \begin{pmatrix} 4 & -1 & 3 \\ -5 & 5 & -3 \\ 2 & 1 & 4 \end{pmatrix} + \begin{pmatrix} 2 & 1 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix} \quad A^{-1} = ?$

Bilet № 19

1) $\begin{vmatrix} 2 & -3 & -4 & 0 \\ 7 & 1 & 6 & 1 \\ 3 & -1 & 8 & 2 \\ 1 & -2 & 2 & 5 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 + 5x_2 - x_3 = 1 \\ 2x_1 + x_2 + x_3 = -3 \\ x_1 + 4x_2 - 3x_3 = 2 \end{cases}$$

3) $A = \begin{pmatrix} 7 & -12 & 6 \\ 10 & -19 & 10 \\ 12 & -24 & 13 \end{pmatrix} * \begin{pmatrix} 2 & 1 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 20

1) $\begin{vmatrix} 2 & 5 & 3 & 6 \\ 3 & 2 & 4 & 1 \\ -5 & 1 & 7 & 3 \\ 6 & 0 & 9 & 2 \end{vmatrix} = ?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} 3x_1 - 3x_2 + x_3 = -10 \\ 2x_1 + 5x_2 - 4x_3 = 5 \\ x_1 + 2x_2 - x_3 = 3 \end{cases}$$

3) $A = \begin{pmatrix} 7 & -12 & 6 \\ 10 & -19 & 10 \\ 12 & -24 & 13 \end{pmatrix} + \begin{pmatrix} 2 & 1 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 21

1) $A = \begin{pmatrix} 4 & -1 & 3 \\ -5 & 5 & -3 \\ 2 & 1 & 4 \end{pmatrix}$ A matritsani rangini toping.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} x_1 - 3x_2 + x_3 = -5 \\ 2x_1 + x_2 - 3x_3 = 24 \\ 4x_1 - x_2 = 18 \end{cases}$$

3) $A = \begin{pmatrix} 4 & -1 & 3 \\ -5 & 5 & -3 \\ 2 & 1 & 4 \end{pmatrix} * \begin{pmatrix} 2 & 1 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1} = ?$

Bilet № 22

1) $A=\begin{pmatrix} 4 & -1 & -3 \\ -5 & 5 & 4 \\ 2 & 1 & 6 \end{pmatrix}$ A matritsani rangini toping.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} x_1 - x_2 + 2x_3 = 3 \\ 3x_1 + 4x_2 - x_3 = -5 \\ 2x_1 + 3x_2 - 5x_3 = 6 \end{cases}$$

3) $A=\begin{pmatrix} 4 & -1 & -3 \\ -5 & 5 & 4 \\ 2 & 1 & 6 \end{pmatrix} * \begin{pmatrix} 2 & 1 & -4 \\ 7 & -1 & 6 \\ 3 & -2 & 8 \end{pmatrix}$ $A^{-1}=?$

Bilet № 23

1) $\begin{vmatrix} 1 & 1 & -4 & -7 \\ 2 & -3 & 6 & 6 \\ 4 & 2 & -8 & 3 \\ 3 & 5 & 1 & -2 \end{vmatrix}=?$ determinantni hisoblang.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} x_1 + x_2 - x_3 = -6 \\ 6x_1 - x_2 + 3x_3 = -2 \\ 5x_1 + 2x_2 + 5x_3 = 3 \end{cases}$$

3) $A=\begin{pmatrix} 4 & -1 & -3 \\ -5 & 5 & 4 \\ 2 & 1 & 6 \end{pmatrix} * \begin{pmatrix} 1 & 1 & -3 \\ 2 & -3 & 1 \\ 4 & -1 & -5 \end{pmatrix}$ $A^{-1}=?$

Bilet № 24

1) $\begin{vmatrix} 1 & 1 & -4 & -7 \\ 0 & -1 & 6 & 6 \\ 1 & 2 & 8 & 3 \\ 3 & 5 & 1 & 2 \end{vmatrix}=?$ determinantni hisoblang.

2) Tenglamalar sistemasining Gauss formulasidan foydalanib yeching.

$$\begin{cases} 2x_1 - x_2 + 5x_3 = -4 \\ x_1 + x_2 + 4x_3 = 9 \\ 2x_1 + 3x_2 - x_3 = 14 \end{cases}$$

3) $A=\begin{pmatrix} 1 & 1 & -4 \\ 0 & -1 & 6 \\ 1 & 2 & 8 \end{pmatrix} * \begin{pmatrix} 1 & 1 & -3 \\ 2 & -3 & 1 \\ 4 & -1 & -5 \end{pmatrix}$ $A^{-1}=?$

Bilet № 25

1) $A=\begin{pmatrix} 1 & 3 & -6 \\ 1 & 4 & 5 \\ -3 & 2 & 3 \end{pmatrix}$ A matritsani rangini toping.

2) Tenglamalar sistemasining Kramer formulasidan foydalanib yeching.

$$\begin{cases} x_1+3x_2-x_3=-2 \\ 2x_1-x_2+4x_3=7 \\ x_1-3x_3=11 \end{cases}$$

3) $A=\begin{pmatrix} 1 & 1 & -4 \\ 0 & -1 & 6 \\ 1 & 2 & 8 \end{pmatrix}-\begin{pmatrix} 1 & 1 & -3 \\ 2 & -3 & 1 \\ 4 & -1 & -5 \end{pmatrix}=?\quad A^{-1}=?$