Matematika 2

Vježbe 5-6

30.03.2026.-13.04.2026.

Zadane sustave riješite Gaussovom metodom eliminacije i rješenja zapišite u matričnom obliku.

1.
$$\begin{aligned} 3x - y + 2z &= 7 \\ 4x - 3y + 2z &= 4 \\ 2x + y + 3z &= 13 \end{aligned}$$

2.
$$\begin{aligned} x + 2y + 3z &= 4 \\ 2x + y - z &= 3 \\ 3x + 3y + 2z &= 7 \end{aligned}$$

3.
$$\begin{aligned} x + 2y + 3z &= 4 \\ 2x + 4y + 6z &= 3 \\ 3x + y - z &= 1 \end{aligned}$$

4.
$$\begin{aligned} 3x + 2y - z &= 0 \\ 2x - y + 3z &= 0 \\ x + y - z &= 0 \end{aligned}$$

5.
$$\begin{aligned} 3x + 2y - z &= 0 \\ 2x - y + 3z &= 0 \\ x + 3y - 4z &= 0 \end{aligned}$$

6.
$$\begin{aligned} x - y + 3z &= 6 \\ 2x + 3y + 4z &= 13 \\ x - 2y + 3z &= 5 \end{aligned}$$

7.
$$\begin{aligned} x_1 + 2x_2 - x_3 + x_4 &= -1 \\ 2x_1 + 5x_2 - x_3 + 2x_4 &= -2 \\ 3x_1 + x_2 - 2x_3 + x_4 &= 3 \\ x_1 + x_2 + 3x_3 + 5x_4 &= 4 \end{aligned}$$

8.
$$\begin{aligned} x_1 + 2x_2 + 4x_3 - 3x_4 &= 0 \\ 3x_1 + 5x_2 + 6x_3 - 4x_4 &= 0 \\ 4x_1 + 5x_2 - 2x_3 + 3x_4 &= 0 \\ 3x_1 + 8x_2 + 24x_3 - 19x_4 &= 0 \end{aligned}$$

U sljedećim zadacima riješite matrične jednadžbe.

9.
$$\begin{bmatrix} 3 & -2 \\ 5 & -4 \end{bmatrix} X = \begin{bmatrix} -1 & 2 \\ -5 & 6 \end{bmatrix}$$

10.
$$\begin{bmatrix} 1 & 2 & 1 \\ 2 & 1 & 2 \\ 1 & 2 & 3 \end{bmatrix} X = \begin{bmatrix} -3 & 7 & 2 \\ -6 & 8 & 4 \\ -1 & 11 & 4 \end{bmatrix}$$