## Задача 1

а)

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

$$\det A_1 = \begin{vmatrix} 1 & -2 \\ 7 & -4 \end{vmatrix} = -4 + 14 = 10$$

$$\det A_2 = \begin{vmatrix} 1 & 1 \\ 3 & 7 \end{vmatrix} = 7 - 3 = 4$$

$$x_1 = \frac{10}{2} = 5 \qquad x_2 = \frac{4}{2} = 2$$

б)

$$\det A = \begin{pmatrix} 2 & -1 & 5 \\ 1 & 1 & -3 \\ 2 & 4 & 1 \end{pmatrix} = 2(1+12) + 1\cdot(1+6) + 5(4-2) = 26 + 7 + 10 = 43$$

$$\det A_1 = \begin{pmatrix} 10 & -1 & 5 \\ -2 & 1 & -3 \\ 1 & 4 & 1 \end{pmatrix} = 10 \cdot 13 + 1(-2+3) + 5(-8-1) = 130 + 1 - 45 = 86$$

$$\det A_2 = \begin{pmatrix} 2 & 10 & 5 \\ 1 & -2 & -3 \\ 2 & 1 & 1 \end{pmatrix} = 2(-2+3) - 10(1+6) + 5(1+4) =$$

$$= 2 - 70 + 25 = -43$$

$$\det A_3 = \begin{pmatrix} 2 & -1 & 10 \\ 1 & 1 & -2 \\ 2 & 4 & 1 \end{pmatrix} = 2(1+8) + 1(1+4) + 10(4-2) = 18 + 5 + 20 = 43$$

$$x_1 = 2 \qquad x_2 = -1 \qquad x_3 = 1$$