Работа над ошибками

(n = 36)

② $\begin{vmatrix} 1 & 0 & -1 & 2 \\ 0 & 2 & 1 & -1 \\ 1 & 1 & -1 & 1 \\ 1 & 1 & -2 & 36 \end{vmatrix} = A_{11} - A_{13} + 2A_{14} = -102 +$

$+6\ 3+3 = -36$ // ответ

$\{A\}$ $\{B\}$ $\{C\}$

④ $\begin{pmatrix} -2 & 0 \\ 1 & -1 \end{pmatrix} \cdot X \cdot \begin{pmatrix} 6 & 8 \\ 2 & 1 \end{pmatrix} = \begin{pmatrix} 2 & 3 \\ -36 & 0 \end{pmatrix}$

$X = A^{-1} \cdot C \cdot B^{-1}$

$A^{-1} = \begin{pmatrix} -\frac{1}{2} & 0 \\ -\frac{1}{2} & -1 \end{pmatrix}$ $B^{-1} = \begin{pmatrix} -\frac{1}{10} & \frac{4}{5} \\ \frac{1}{5} & -\frac{3}{5} \end{pmatrix}$

$X = \begin{pmatrix} -\frac{1}{2} & 0 \\ -\frac{1}{2} & -1 \end{pmatrix} \cdot \begin{pmatrix} 2 & 3 \\ -36 & 0 \end{pmatrix} \cdot \begin{pmatrix} -\frac{1}{10} & \frac{4}{5} \\ \frac{1}{5} & -\frac{3}{5} \end{pmatrix} =$

$= \begin{pmatrix} -\frac{2}{10} & \frac{1}{10} \\ -\frac{38}{10} & \frac{289}{10} \end{pmatrix}$ $sum(X) = 25$ // ответ

⑥ $\begin{cases} 5x_1 - 6x_2 + 4x_3 = 3 \\ 3x_1 - 3x_2 + 2x_3 = 2 \\ 4x_1 - 5x_2 + 2x_3 = 36 \end{cases} \sim \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 3 & -3 & 2 & 2 \\ 4 & -5 & 2 & 36 \end{array}\right)$

$\Delta = \begin{vmatrix} 5 & -6 & 4 \\ 3 & -3 & 2 \\ 4 & -5 & 2 \end{vmatrix} = -4$

$\Delta_1 = \begin{vmatrix} 3 & -6 & 4 \\ 2 & -3 & 2 \\ 36 & -5 & 2 \end{vmatrix} = -4$

$\Delta_2 = \begin{vmatrix} 5 & 3 & 4 \\ 3 & 2 & 2 \\ 4 & 36 & 2 \end{vmatrix} = 66$

$\Delta_3 = \begin{vmatrix} 5 & -6 & 3 \\ 3 & -3 & 2 \\ 4 & -5 & 36 \end{vmatrix} = 101$

$x_1 = 1$

$x_2 = -\frac{66}{4}$

$x_3 = -\frac{101}{4}$

$Sum(x_1, x_2, x_3) = -40,75$ //ОТВ

(7)

$$\left(\begin{array}{ccc|c} 5 & -6 & 4 & 1 \\ 3 & -3 & 2 & 0 \\ 4 & -5 & 2 & 36 \end{array}\right) \sim \{\text{I} - 2\,\text{II}\} \sim$$

$$\sim \left(\begin{array}{ccc|c} -1 & 0 & 0 & 1 \\ 3 & -3 & 2 & 0 \\ 4 & -5 & 2 & 36 \end{array}\right) \sim \{\text{II} - \text{III}\} \sim$$

$$\sim \left(\begin{array}{ccc|c} -1 & 0 & 0 & 1 \\ -1 & 2 & 0 & -36 \\ 4 & -5 & 2 & 36 \end{array}\right)$$

$x_1 = -1$

$x_2 = -\frac{37}{2}$

$x_3 = -\frac{105}{4}$

$\text{Sum}(x_1, x_2, x_3) = -45{,}75$ // Ответ

⑧ $\begin{vmatrix} 3 & -2 & 1 \\ -1 & 1 & -2 \\ 2 & 1 & -3 \end{vmatrix} = 8 \neq 0 \Rightarrow \bar{m}, \bar{s}, \bar{p}$ - базис

$\bar{a} = 36\bar{i} - 6\bar{j} + 5\bar{k}$

$$\begin{cases} 3a_m - a_s + 2a_p = 36 \\ -2a_m + a_s + a_p = -6 \\ a_m - 2a_s - 3a_p = 5 \end{cases} \sim \left(\begin{array}{ccc|c} 3 & -1 & 2 & 36 \\ -2 & 1 & 1 & -6 \\ 1 & -2 & -3 & 5 \end{array}\right)$$

$\Delta = 8 \quad \Delta_m = -9 \quad \Delta_p = 83 \quad \Delta_s = -149$

$a_m = -\frac{9}{8}$

$a_p = \frac{83}{8}$

$a_s = -\frac{149}{8}$

$sum(a_m, a_p, a_s) = -\frac{75}{8}$ // ответ

⑪ $2\bar{p}+\bar{q}$ и $4\bar{p}-3\bar{q}$

$|\bar{p}|=|\bar{q}|=36$

$(\hat{p},\hat{q})=\frac{\pi}{6}$ $\quad S=|[\bar{AB}\times\bar{AD}]|$

$\bar{AB}=\bar{p}-2\bar{q}$

$\bar{AD}=3\bar{p}-\bar{q}$

$S=5|\bar{p}|\cdot|\bar{q}|\cdot\sin\frac{\pi}{6}=5\cdot36\cdot36\cdot\frac{1}{2}=$

$=3240$ // Ответ