

Константин
 Жарев УИ: 45028 11.5
 347+2+1 DP № 3 20.75
 3 0
 40.75

$$\left(\begin{array}{cc|cc} 2 & 5 & 5 & -5 \\ 5 & 2 & 5 & -5 \\ 5 & 5 & 2 & 5 \\ 5 & - & - & - \\ 5 & 5 & 5 & -2 \end{array} \right) \left(\begin{array}{ccccc} 1 & 0 & 0 & - & 0 \\ 0 & 1 & 0 & - & 0 \\ 0 & 0 & 1 & 0 & - \\ 0 & - & - & - & 0 \\ 0 & 0 & 0 & - & 1 \end{array} \right)$$

$$\left(\begin{array}{cc|cc} 2 & 5 & 5 & -5 \\ 3 & -3 & 0 & -0 \\ 3 & 0 & -3 & 0 \\ - & - & - & - \\ 3 & 0 & 0 & -3 \end{array} \right) \left(\begin{array}{ccccc} 1 & 0 & 0 & - & 0 \\ -1 & 1 & 0 & - & 0 \\ -1 & 0 & 1 & 0 & - \\ - & - & - & - & 0 \\ -1 & 0 & 0 & - & 0 \end{array} \right)$$

Разделение + раз (для перевода) на 3

$$\left(\begin{array}{cc|cc} 2 & 5 & 5 & -5 \\ 1 & -1 & 0 & -0 \\ 1 & 0 & 1 & 0 \\ - & - & - & - \\ 1 & 0 & 0 & -1 \end{array} \right) \left(\begin{array}{ccccc} 1 & 0 & 0 & - & 0 \\ \frac{1}{3} & \frac{1}{3} & 0 & - & 0 \\ \frac{1}{3} & 0 & \frac{1}{3} & 0 & - \\ - & - & - & - & 0 \\ -\frac{1}{3} & 0 & 0 & - & \frac{1}{3} \end{array} \right)$$

$$\left(\begin{array}{cc|cc} 0 & 5 & 5 & -7 \\ 0 & -1 & 0 & -1 \\ 0 & 0 & -1 & 0 \\ - & - & - & - \\ 1 & 0 & 0 & -1 \end{array} \right) \left(\begin{array}{ccccc} \frac{5}{3} & 0 & 0 & - & -\frac{2}{3} \\ 0 & \frac{1}{3} & 0 & - & -\frac{1}{3} \\ 0 & 0 & \frac{1}{3} & 0 & -\frac{1}{3} \\ - & - & - & - & 0 \\ -\frac{1}{3} & 0 & 0 & - & \frac{1}{3} \end{array} \right)$$

$$\left(\begin{array}{cc|cc} 1 & 0 & 0 & -1 \\ 1 & 0 & 0 & -1 \\ 0 & +1 & 0 & -1 \\ 0 & 0 & 1 & 0 \\ - & - & - & - \end{array} \right) \left(\begin{array}{ccccc} -\frac{1}{3} & 0 & 0 & - & 1 \\ -\frac{1}{3} & 0 & 0 & - & \frac{1}{3} \\ 0 & -\frac{1}{3} & 0 & - & \frac{1}{3} \\ 0 & 0 & \frac{1}{3} & 0 & +\frac{1}{3} \\ - & - & - & - & 0 \end{array} \right)$$

$$\left(\begin{array}{cc|cc} 0 & 5 & 5 & -7 \\ 0 & 0 & 0 & -1 \end{array} \right) \left(\begin{array}{ccccc} \frac{5}{3} & 0 & 0 & - & -\frac{2}{3} \\ 0 & 0 & 0 & - & \frac{1}{3} \end{array} \right)$$

Умножение + раз (для перевода) на (-5) и
о приведение к единице последняя

$$\begin{array}{cccc|ccc} f & 0 & 0 & -1 & -\frac{1}{3} & 0 & 0 & \frac{1}{3} \\ g & 1 & 0 & -1 & 0 & -\frac{1}{3} & 0 & \frac{1}{3} \\ h & 0 & 1 & 0 & 0 & 0 & -\frac{1}{3} & \frac{1}{3} \\ \hline & 0 & 0 & 0 & \frac{5}{3} & \frac{5}{3} & \frac{5}{3} & -\frac{2}{3} + (n \cdot (\frac{1}{3} - \frac{1}{5})) \end{array}$$

Разделение полезных рег на ~~7~~ $7 + (n-3)$ и

50 прибавле ѿ

$$\begin{array}{ccccccc} 1 & 0 & 0 & - & 0 & - \frac{5}{3(7+5n)} & \frac{5}{3(7+5n)} \\ 0 & 1 & 0 & - & 0 & & \\ 0 & 0 & 1 & 0 & - & 0 & \\ 0 & 0 & 0 & - & 1 & & \end{array}$$

$$\begin{array}{cccc|ccc} 1 & 0 & 0 & \dots & 0 & -\frac{1}{3} + \frac{5}{3(7+5n)} & \frac{5}{3(7+5n)} & \dots & -\frac{1}{3} - \frac{2}{3}(n - \frac{1}{3}(-5)) \\ 0 & 1 & 0 & \dots & 0 & \frac{5}{3(7+5n)} & -\frac{1}{3} + \frac{5}{3(7+5n)} & \dots & \frac{1}{7+5n} \\ 0 & 0 & 1 & \dots & 0 & \dots & \dots & \dots & \frac{1}{3} - \frac{2}{3}(n - \frac{1}{3}(-5)) \\ 0 & 0 & 0 & \dots & 1 & \frac{5}{3(7+5n)} & \frac{5}{3(7+5n)} & \dots & \frac{2}{3} + (n - \frac{1}{3}(-5)) \end{array}$$

N wagoK

~~3+7+2+2~~

$$\left(\begin{array}{cccc|c} -2 & -2 & -1 & 2 & -1 \\ 3 & 4 & 1 & 3 & 2 \\ 1 & -1 & 1 & 1 & 3 \\ -2 & -8 & 1 & M-9 & 5-2 \end{array} \right) \sim$$

$$\left(\begin{array}{cccc|c} -2 & -2 & -1 & 2 & -1 \\ 1 & 2 & 0 & 5 & 2-1 \\ -1 & -3 & 0 & 3 & 2 \\ -4 & -10 & 0 & M-7 & 4-2 \end{array} \right) \sim$$

$$\left(\begin{array}{cccc|c} 0 & 4 & -1 & -4 & -5 \\ 0 & -1 & 0 & 8 & -2+1 \\ -1 & -3 & 0 & 3 & 2 \\ 0 & 2 & 0 & M-19 & -4-2 \end{array} \right) \sim$$

$$\left(\begin{array}{cccc|c} 0 & 0 & -1 & 28 & 42-1 \\ 0 & -1 & 0 & 8 & -2+1 \\ -1 & 0 & 0 & -21 & -2-1 \\ 0 & 0 & 0 & M-3 & 2-2 \end{array} \right) \sim$$

$$\left(\begin{array}{cccc|c} 0 & 0 & -1 & 28 & 42+1 \\ 0 & -1 & 0 & 8 & 2+1 \\ 1 & 0 & 0 & 21 & 2+1 \\ 0 & 0 & 0 & M-3 & 2-2 \end{array} \right)$$

$$X_4 = \frac{-2-2}{M-3}, \text{ rpu } M \neq -3, 40 \\ M=3 \Rightarrow \text{H.P}$$

$$A) \text{ при } M \neq -3, \lambda = 2$$

$$\begin{aligned}x_1 &= 3 \\x_2 &= -3 \\x_3 &= -9 \\x_4 &= 0\end{aligned}$$

$$? A) \mu \neq 3$$

$$B) \text{ при } M \neq -3, \lambda \neq 2$$

$$x_1 = \lambda + 1 - \frac{21(\lambda - 2)}{M - 3}$$

$$\begin{cases}\mu = 3 \\ \lambda \neq 2\end{cases}$$

$$x_2 = \frac{8(\lambda - 2)}{M - 3} - \lambda - 1$$

$$x_3 = \frac{28(\lambda - 2)}{M - 3} - 4\lambda - 1$$

$$x_4 = \frac{\lambda - 2}{M - 3}$$

$$B) \text{ при } \lambda = 0, M = 0$$

$$x_1 = 1 - \frac{21 - 2}{-3}$$

$$x_1 = 1 + \frac{19}{3} - \frac{22}{3}$$

$$x_2 = \frac{-16}{-3} - 1 = \frac{13}{3}$$

$$B) \text{ при } \lambda = 1, M = 1$$

$$x_3 = \frac{-56}{-3} - 1 = \frac{53}{3}$$

$$x_4 = \frac{-1}{-2} = \frac{1}{2}$$

$$x_4 = \frac{-2}{-3} = \frac{2}{3}$$

$$x_3 = \frac{-28}{-2} = 14 - 4 - 1 = 9$$

$$x_2 = \frac{-8}{-2} = 4 - 1 - 1 = 2$$

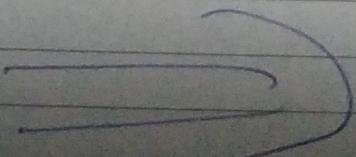
$$x_1 = 2 - \frac{-21}{-2} = 2 - \frac{21 - 4 - 21}{2} = -\frac{17}{2}$$

$3+4+2+4$

$$\left(\begin{array}{ccccc} -22 & 1 & -6 & 14 & -2 \\ -7 & 1 & 1 & -9 & -4 \\ 22 & -3 & 0 & 17 & 11 \\ 16 & -1 & 3 & -4 & 3 \\ -40 & 4 & -1 & 2-19 & -15 \\ 2+14+55 & 4 & 9 & -9 & 12 \end{array} \right)$$

$$\left(\begin{array}{ccccc} -64 & 7 & 0 & -40 & -26 \\ -7 & 1 & 1 & -9 & -4 \\ 27 & -3 & 0 & 17 & 11 \\ 37 & -4 & 0 & 23 & 15 \\ -47 & 5 & 0 & 2-28 & -19 \\ 2+14+18 & -13 & 0 & 72 & 48 \\ -64 & 7 & 0 & -40 & -26 \\ -7 & 1 & 1 & -9 & -4 \\ -10 & 1 & 0 & -6 & -4 \\ 37 & -4 & 0 & 23 & 15 \\ -47 & 5 & 0 & 2-28 & -19 \\ 2+14+18 & -13 & 0 & 72 & 48 \end{array} \right)$$

$$\left(\begin{array}{ccccc} 6 & 0 & 0 & 2 & 2 \\ 3 & 0 & 1 & -3 & 0 \\ -10 & 1 & 0 & -6 & -4 \\ -3 & 0 & 0 & -1 & -1 \\ 3 & 0 & 0 & 2+2 & 1 \\ 2+14-12 & 0 & 0 & -6 & -4 \end{array} \right)$$



$$\left(\begin{array}{ccccc} 0 & 0 & 0 & 0 & 0 \\ 3 & 0 & 1 & -3 & 0 \\ 2 & 1 & 0 & -2 & 0 \\ -3 & 0 & 0 & -1 & -1 \\ 0 & 0 & 0 & \lambda+1 & 0 \\ \lambda+\mu & 0 & 0 & -2 & 0 \end{array} \right) \text{ if } \lambda = -1$$

$$\left(\begin{array}{ccccc} 3 & 0 & 1 & -3 & 0 \\ 2 & 1 & 0 & -2 & 0 \\ 3 & 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & \lambda+1 & 0 \\ \lambda+\mu & 0 & 0 & -2 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{array} \right)$$

1st. rpu $\lambda = -1$, rank (A) = 4

2nd. rpu $\lambda \neq -1$, rank (A) = 5

$\lambda \neq -\mu$

~~$\lambda + 1 + \mu = -2$, rank char~~

~~$\lambda + 1$~~

~~rank = 4~~