Ответы: 222 ПИ. Вариант 27

1. $$\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{1}{3} & 1 & 0 & 0 \\ \frac{7}{9} & \frac{1}{3} & 1 & 0 \\ -\frac{7}{9} & -\frac{53}{51} & -\frac{46}{697} & 1 \end{bmatrix}, U = \begin{bmatrix} 9 & -4 & 6 & 7 \\ 0 & -\frac{17}{3} & 6 & -\frac{16}{3} \\ 0 & 0 & -\frac{41}{3} & -\frac{32}{3} \\ 0 & 0 & 0 & -\frac{4044}{697} \end{bmatrix}$

3. $$\begin{pmatrix} -3 & -3 & -16 \\ -13 & 18 & 3 \\ -3 & -8 & -16 \end{pmatrix}$$

4. $$\begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 6 & 2 & 5 & 3 & 4 & 1 \end{pmatrix}; \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 1 & 2 & 5 & 3 & 6 & 4 \end{pmatrix}$$

5. $$\sigma = (1,3,2,5,6,8,9)(4,7), ord = 14, \sigma^{-739} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 5 & 8 & 6 & 7 & 9 & 1 & 4 & 3 & 2 \end{pmatrix} = (1,5,9,2,8,3,6)(4,7)$$

6. Id;(2, 3, 4);(2, 4, 3);(1, 5, 6, 7);
(1, 5, 6, 7) (2, 3, 4);(1, 5, 6, 7) (2, 4, 3);(1, 6) (5, 7);(1, 6) (2, 3, 4) (5, 7);(1, 6) (2, 4, 3) (5, 7);
(1, 7, 6, 5);(1, 7, 6, 5) (2, 3, 4);(1, 7, 6, 5) (2, 4, 3);

7. $\frac{25(-50)^n}{21} - \frac{4(-8)^n}{21}$

8. $-1 + -2 * x + 0 * x^2 + 1 * x^3 + -3 * x^4$

9. При $\lambda = 0$

10. Определитель: $-28\lambda - 114$, при $\lambda = [-57/14]$ ранг равен 3, иначе 4