Ответы: 225 ПИ. Вариант 44

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{1}{8} & 1 & 0 & 0 \\ \frac{9}{8} & -\frac{19}{43} & 1 & 0 \\ -\frac{3}{8} & -\frac{95}{43} & -\frac{741}{127} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 8 & -5 & -4 & 2 \\ 0 & \frac{43}{8} & -\frac{7}{2} & \frac{17}{4} \\ 0 & 0 & \frac{127}{43} & -\frac{16}{43} \\ 0 & 0 & 0 & \frac{1647}{127} \end{bmatrix}$

3. $$\begin{pmatrix} -1 & 1 & 13 \\ 2 & -1 & 0 \\ 6 & -13 & 7 \end{pmatrix}$$

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

5. $$\sigma = (1,8,7,2,4)(3,9,6,5), ord = 20, \sigma^{-739} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 8 & 4 & 9 & 1 & 3 & 5 & 2 & 7 & 6 \end{pmatrix} = (1,8,7,2,4)(3,9,6,5)$$

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

7. $\frac{2(-80)^n}{3} + \frac{40^n}{3}$

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

9. При $\lambda = -7$

10. Определитель: $66\lambda + 107$, при $\lambda = [-107/66]$ ранг равен 3, иначе 4