Ответы: 228 ПИ. Вариант 39

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{1}{6} & 1 & 0 & 0 \\ \frac{5}{6} & \frac{11}{5} & 1 & 0 \\ -1 & 3 & \frac{27}{11} & 1 \end{bmatrix}, U = \begin{bmatrix} 6 & -4 & 8 & -7 \\ 0 & -\frac{5}{3} & -\frac{20}{3} & -\frac{25}{6} \\ 0 & 0 & 11 & 15 \\ 0 & 0 & 0 & -\frac{887}{22} \end{bmatrix}$

3. $$\begin{pmatrix} -16 & -14 & -10 \\ -11 & 16 & 8 \\ -14 & -7 & 5 \end{pmatrix}$$

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

5. $$\sigma = (1,6,3)(2,9,7,8,4,5), ord = 6, \sigma^{-743} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 6 & 9 & 1 & 5 & 2 & 3 & 8 & 4 & 7 \end{pmatrix} = (1,6,3)(2,9,7,8,4,5)$$

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

7. $\frac{5(-10)^n}{8} + \frac{3 \cdot 6^n}{8}$

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

9. При $\lambda = -9$

10. Определитель: $95 - 10\lambda$, при $\lambda = [19/2]$ ранг равен 3, иначе 4