Ответы: 222 ПИ. Вариант 6

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{7}{4} & 1 & 0 & 0 \\ -\frac{3}{4} & -\frac{63}{43} & 1 & 0 \\ \frac{5}{4} & \frac{49}{43} & -\frac{87}{247} & 1 \end{bmatrix}, U = \begin{bmatrix} 4 & 9 & 5 & 8 \\ 0 & -\frac{43}{4} & -\frac{75}{4} & -11 \\ 0 & 0 & -\frac{1235}{43} & -\frac{91}{43} \\ 0 & 0 & 0 & \frac{72}{19} \end{bmatrix}$

3. $$\begin{pmatrix} -5 & -11 & 2 \\ -18 & -20 & -5 \\ 10 & 18 & -14 \end{pmatrix}$$

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

5. $$\sigma = (1,3,6,7)(2,9,4)(5,8), ord = 12, \sigma^{-743} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 9 & 6 & 2 & 8 & 7 & 1 & 5 & 4 \end{pmatrix} = (1,3,6,7)(2,9,4)(5,8)$$

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

7. брак

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

9. При $\lambda = -4$

10. Определитель: $265 - 78\lambda$, при $\lambda = [265/78]$ ранг равен 3, иначе 4