Ответы: 227 ПИ. Вариант 6

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{6}{7} & 1 & 0 & 0 \\ -\frac{8}{7} & \frac{1}{13} & 1 & 0 \\ -\frac{6}{7} & \frac{34}{13} & \frac{41}{114} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -7 & 8 & 5 & 0 \\ 0 & \frac{13}{7} & -\frac{5}{7} & -2 \\ 0 & 0 & \frac{114}{13} & -\frac{89}{13} \\ 0 & 0 & 0 & \frac{763}{114} \end{bmatrix}$

3. $$\begin{pmatrix} 15 & 19 & 18 \\ -19 & -8 & -4 \\ -10 & -10 & -10 \end{pmatrix}$$

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

5. $$\sigma = (1,7,6,3)(2,9,8,5,4), ord = 20, \sigma^{-773} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 8 & 6 & 9 & 2 & 7 & 1 & 4 & 5 \end{pmatrix} = (1,3,6,7)(2,8,4,9,5)$$

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

7. $-\frac{27(-27)^n}{13} + \frac{40(-40)^n}{13}$

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

9. При $\lambda = -5$

10. Определитель: $-36\lambda - 240$, при $\lambda = [-20/3]$ ранг равен 3, иначе 4