Ответы: 229 ПИ. Вариант 44

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 9 & 1 & 0 & 0 \\ -1 & -\frac{5}{62} & 1 & 0 \\ 0 & \frac{9}{62} & \frac{333}{187} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -1 & -8 & -5 & -9 \\ 0 & 62 & 37 & 71 \\ 0 & 0 & -\frac{187}{62} & -\frac{265}{62} \\ 0 & 0 & 0 & \frac{992}{187} \end{bmatrix}$

3. $$\begin{pmatrix} 2 & -8 & -4 \\ -16 & 13 & -6 \\ -5 & 4 & -5 \end{pmatrix}$$

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

5. $$\sigma = (1,9,6,4,5,3,8)(2,7), ord = 14, \sigma^{-751} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 7 & 4 & 9 & 6 & 1 & 2 & 5 & 8 \end{pmatrix} = (1,3,4,9,8,5,6)(2,7)$$

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

7. $\frac{50 \cdot 100^n}{41} - \frac{9 \cdot 18^n}{41}$

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

9. При $\lambda = -7$

10. Определитель: $18\lambda + 117$, при $\lambda = [-13/2]$ ранг равен 3, иначе 4