Ответы: 224 ПИ. Вариант 13

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 4 & 1 & 0 & 0 \\ -9 & -\frac{52}{15} & 1 & 0 \\ 5 & \frac{26}{15} & -\frac{14}{19} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 1 & -5 & -6 & 7 \\ 0 & 15 & 25 & -25 \\ 0 & 0 & \frac{95}{3} & -\frac{95}{3} \\ 0 & 0 & 0 & -18 \end{bmatrix}$

3. $$\begin{pmatrix} -1 & -3 & -14 \\ -1 & -16 & -11 \\ -6 & 17 & -6 \end{pmatrix}$$

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

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

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

7. $-35(-35)^n + 36(-36)^n$

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

9. При $\lambda = 4$

10. Определитель: $140\lambda + 154$, при $\lambda = [-11/10]$ ранг равен 3, иначе 4