Ответы: 226 ПИ. Вариант 19

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ 1 & -\frac{1}{5} & 1 & 0 \\ -\frac{3}{8} & \frac{15}{16} & \frac{45}{32} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -8 & -1 & -3 & -1 \\ 0 & -10 & -9 & -2 \\ 0 & 0 & \frac{26}{5} & \frac{48}{5} \\ 0 & 0 & 0 & -4 \end{bmatrix}$

3. $$\begin{pmatrix} 16 & 2 & -19 \\ -18 & 2 & -2 \\ 14 & -7 & 17 \end{pmatrix}$$

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

5. $$\sigma = (1,9,6,8,4,2)(3,5,7), ord = 6, \sigma^{-811} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 4 & 7 & 8 & 3 & 9 & 5 & 6 & 1 \end{pmatrix} = (1,2,4,8,6,9)(3,7,5)$$

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

7. $\frac{8(-72)^n}{11} + \frac{3 \cdot 27^n}{11}$

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

9. При $\lambda = -9$

10. Определитель: $135 - 63\lambda$, при $\lambda = [15/7]$ ранг равен 3, иначе 4