Ответы: 224 ПИ. Вариант 4

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{5}{6} & 1 & 0 & 0 \\ \frac{5}{3} & -\frac{64}{5} & 1 & 0 \\ -1 & -\frac{36}{5} & \frac{8}{7} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -6 & -1 & 7 & 3 \\ 0 & -\frac{5}{6} & \frac{23}{6} & \frac{5}{2} \\ 0 & 0 & \frac{147}{5} & 36 \\ 0 & 0 & 0 & -\frac{127}{7} \end{bmatrix}$

3. $$\begin{pmatrix} -3 & 7 & 17 \\ 5 & 9 & 16 \\ -10 & 5 & -18 \end{pmatrix}$$

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

5. $$\sigma = (1,3,4,5,8)(2,6)(7,9), ord = 10, \sigma^{-797} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 5 & 6 & 8 & 1 & 3 & 2 & 9 & 4 & 7 \end{pmatrix} = (1,5,3,8,4)(2,6)(7,9)$$

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

7. $\frac{7(-7)^n}{13} + \frac{6 \cdot 6^n}{13}$

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

9. При $\lambda = 6$

10. Определитель: $-19\lambda - 190$, при $\lambda = [-10]$ ранг равен 3, иначе 4