Ответы: 223 ПИ. Вариант 4

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ -\frac{4}{3} & \frac{28}{3} & 1 & 0 \\ \frac{10}{3} & -\frac{83}{6} & -\frac{533}{422} & 1 \end{bmatrix}, U = \begin{bmatrix} -3 & 8 & -3 & 4 \\ 0 & 2 & -7 & 1 \\ 0 & 0 & \frac{211}{3} & -7 \\ 0 & 0 & 0 & -\frac{3659}{211} \end{bmatrix}$

3. $$\begin{pmatrix} 6 & -18 & 9 \\ 1 & 12 & 1 \\ -14 & 13 & -19 \end{pmatrix}$$

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

5. $$\sigma = (1,7,6)(2,5)(3,9,8,4), ord = 12, \sigma^{-827} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 7 & 5 & 9 & 3 & 2 & 1 & 6 & 4 & 8 \end{pmatrix} = (1,7,6)(2,5)(3,9,8,4)$$

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

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

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

9. При $\lambda = 3$

10. Определитель: $70 - 8\lambda$, при $\lambda = [35/4]$ ранг равен 3, иначе 4