Ответы: 226 ПИ. Вариант 24

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{4}{9} & 1 & 0 & 0 \\ -\frac{2}{9} & \frac{5}{37} & 1 & 0 \\ -\frac{10}{9} & \frac{52}{37} & \frac{347}{91} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 9 & 7 & 8 & 8 \\ 0 & \frac{37}{9} & \frac{113}{9} & \frac{77}{9} \\ 0 & 0 & -\frac{182}{37} & -\frac{51}{37} \\ 0 & 0 & 0 & \frac{557}{91} \end{bmatrix}$

3. $$\begin{pmatrix} 6 & -4 & -11 \\ -19 & -17 & 15 \\ 19 & -16 & -6 \end{pmatrix}$$

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

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

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

7. $-\frac{(-1)^n}{7} + \frac{8(-8)^n}{7}$

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

9. При $\lambda = -7$

10. Определитель: $820 - 60\lambda$, при $\lambda = [41/3]$ ранг равен 3, иначе 4