Ответы: 229 ПИ. Вариант 23

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{4}{7} & 1 & 0 & 0 \\ -\frac{1}{7} & \frac{31}{26} & 1 & 0 \\ 0 & \frac{21}{52} & -\frac{5}{426} & 1 \end{bmatrix}, U = \begin{bmatrix} 7 & 1 & 9 & 4 \\ 0 & -\frac{52}{7} & \frac{99}{7} & \frac{16}{7} \\ 0 & 0 & -\frac{639}{26} & \frac{76}{13} \\ 0 & 0 & 0 & \frac{457}{213} \end{bmatrix}$

3. $$\begin{pmatrix} 10 & -11 & -18 \\ -20 & 4 & 19 \\ 7 & 12 & 5 \end{pmatrix}$$

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

5. $$\sigma = (1,8,3,7,4,2)(5,9,6), ord = 6, \sigma^{-733} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 4 & 8 & 7 & 6 & 9 & 3 & 1 & 5 \end{pmatrix} = (1,2,4,7,3,8)(5,6,9)$$

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

7. брак

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

9. При $\lambda = -4$

10. Определитель: $8\lambda - 84$, при $\lambda = [21/2]$ ранг равен 3, иначе 4