Ответы: 228 ПИ. Вариант 35

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{3}{2} & 1 & 0 & 0 \\ \frac{3}{2} & 3 & 1 & 0 \\ 1 & \frac{26}{3} & \frac{11}{6} & 1 \end{bmatrix}, U = \begin{bmatrix} 2 & -5 & -5 & -1 \\ 0 & \frac{3}{2} & \frac{1}{2} & \frac{15}{2} \\ 0 & 0 & 2 & -25 \\ 0 & 0 & 0 & -\frac{115}{6} \end{bmatrix}$

3. $$\begin{pmatrix} 3 & -5 & -4 \\ 18 & -20 & 7 \\ -1 & -5 & -4 \end{pmatrix}$$

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

5. $$\sigma = (1,8,5,2,9,4,6)(3,7), ord = 14, \sigma^{-823} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 6 & 7 & 8 & 4 & 5 & 3 & 9 & 1 \end{pmatrix} = (1,2,6,5,4,8,9)(3,7)$$

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

7. $\frac{(-40)^n}{3} + \frac{2 \cdot 80^n}{3}$

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

9. При $\lambda = -8$

10. Определитель: $6\lambda - 63$, при $\lambda = [21/2]$ ранг равен 3, иначе 4