Ответы: 223 ПИ. Вариант 34

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 5 & 1 & 0 & 0 \\ 9 & \frac{62}{29} & 1 & 0 \\ -9 & -\frac{46}{29} & -\frac{581}{309} & 1 \end{bmatrix}, U = \begin{bmatrix} 1 & -6 & 1 & -7 \\ 0 & 29 & -12 & 31 \\ 0 & 0 & \frac{309}{29} & \frac{50}{29} \\ 0 & 0 & 0 & -\frac{3889}{309} \end{bmatrix}$

3. $$\begin{pmatrix} -2 & -4 & -14 \\ -13 & -18 & 5 \\ -10 & 15 & 1 \end{pmatrix}$$

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

5. $$\sigma = (1,2,7,6,3,9,8)(4,5), ord = 14, \sigma^{-821} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 9 & 8 & 7 & 5 & 4 & 2 & 1 & 3 & 6 \end{pmatrix} = (1,9,6,2,8,3,7)(4,5)$$

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

7. $\frac{15(-60)^n}{17} + \frac{2 \cdot 8^n}{17}$

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

9. При $\lambda = -7$

10. Определитель: $55 - 65\lambda$, при $\lambda = [11/13]$ ранг равен 3, иначе 4