Ответы: 229 ПИ. Вариант 37

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -6 & 1 & 0 & 0 \\ 3 & -\frac{5}{14} & 1 & 0 \\ 8 & -\frac{3}{14} & \frac{167}{17} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 1 & 1 & 8 & -3 \\ 0 & 14 & 53 & -17 \\ 0 & 0 & -\frac{85}{14} & -\frac{43}{14} \\ 0 & 0 & 0 & \frac{740}{17} \end{bmatrix}$

3. $$\begin{pmatrix} -1 & 15 & -5 \\ 7 & 17 & -11 \\ 5 & -4 & -8 \end{pmatrix}$$

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

5. $$\sigma = (1,3)(2,4,5,8,7,9,6), ord = 14, \sigma^{-787} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 7 & 1 & 9 & 6 & 8 & 4 & 2 & 5 \end{pmatrix} = (1,3)(2,7,4,9,5,6,8)$$

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

7. $-\frac{10 \cdot 10^n}{17} + \frac{27 \cdot 27^n}{17}$

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

9. При $\lambda = -10$

10. Определитель: $-55\lambda - 30$, при $\lambda = [-6/11]$ ранг равен 3, иначе 4