Ответы: 225 ПИ. Вариант 38

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 7 & 1 & 0 & 0 \\ -6 & -\frac{7}{5} & 1 & 0 \\ 8 & \frac{26}{15} & -\frac{20}{21} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -1 & 3 & -1 & 2 \\ 0 & -15 & 5 & -12 \\ 0 & 0 & 7 & -\frac{74}{5} \\ 0 & 0 & 0 & -\frac{346}{105} \end{bmatrix}$

3. $$\begin{pmatrix} -16 & -19 & 15 \\ 19 & -3 & 5 \\ -10 & 9 & 2 \end{pmatrix}$$

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

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

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

7. $\frac{10(-20)^n}{37} + \frac{27 \cdot 54^n}{37}$

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

9. При $\lambda = 8$

10. Определитель: $278 - 139\lambda$, при $\lambda = [2]$ ранг равен 3, иначе 4