Ответы: 226 ПИ. Вариант 21

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 \\ 1 & \frac{17}{13} & 1 & 0 \\ 7 & \frac{45}{13} & -\frac{1}{8} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 1 & 7 & 8 & 2 \\ 0 & -13 & -18 & 0 \\ 0 & 0 & \frac{176}{13} & 6 \\ 0 & 0 & 0 & -\frac{17}{4} \end{bmatrix}$

3. $$\begin{pmatrix} -15 & -7 & -9 \\ -7 & 18 & 12 \\ 14 & 18 & -2 \end{pmatrix}$$

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

5. $$\sigma = (1,7,8,2,4,3,6)(5,9), ord = 14, \sigma^{-773} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 4 & 1 & 8 & 7 & 9 & 2 & 3 & 6 & 5 \end{pmatrix} = (1,4,7,3,8,6,2)(5,9)$$

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

7. $\frac{2(-24)^n}{3} + \frac{12^n}{3}$

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

9. При $\lambda = 8$

10. Определитель: $14\lambda + 134$, при $\lambda = [-67/7]$ ранг равен 3, иначе 4