Ответы: 225 ПИ. Вариант 22

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{2}{5} & 1 & 0 & 0 \\ -\frac{2}{5} & \frac{37}{22} & 1 & 0 \\ -\frac{3}{10} & \frac{63}{44} & \frac{112}{233} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -10 & -1 & -10 & 4 \\ 0 & -\frac{22}{5} & -12 & \frac{33}{5} \\ 0 & 0 & \frac{233}{11} & -\frac{7}{2} \\ 0 & 0 & 0 & -\frac{1461}{932} \end{bmatrix}$

3. $$\begin{pmatrix} 19 & 6 & 16 \\ 5 & -8 & 19 \\ -8 & 18 & 7 \end{pmatrix}$$

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

5. $$\sigma = (1,2,3,4)(5,7,8)(6,9), ord = 12, \sigma^{-743} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 3 & 4 & 1 & 7 & 9 & 8 & 5 & 6 \end{pmatrix} = (1,2,3,4)(5,7,8)(6,9)$$

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

7. $\frac{5(-15)^n}{12} + \frac{7 \cdot 21^n}{12}$

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

9. При $\lambda = 9$

10. Определитель: $80\lambda - 320$, при $\lambda = [4]$ ранг равен 3, иначе 4