Ответы: 224 ПИ. Вариант 14

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 3 & 1 & 0 & 0 \\ -\frac{3}{2} & -\frac{5}{18} & 1 & 0 \\ -\frac{5}{2} & -\frac{37}{54} & -\frac{151}{327} & 1 \end{bmatrix}, U = \begin{bmatrix} 2 & -9 & -2 & -10 \\ 0 & 27 & 7 & 20 \\ 0 & 0 & -\frac{109}{18} & -\frac{31}{9} \\ 0 & 0 & 0 & -\frac{3560}{327} \end{bmatrix}$

3. $$\begin{pmatrix} 6 & -11 & 3 \\ -11 & 15 & -18 \\ -19 & 8 & 9 \end{pmatrix}$$

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

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

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

7. $\frac{9(-63)^n}{14} + \frac{5 \cdot 35^n}{14}$

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

9. При $\lambda = -10$

10. Определитель: $627 - 84\lambda$, при $\lambda = [209/28]$ ранг равен 3, иначе 4