Ответы: 221 ПИ. Вариант 27

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{5}{9} & 1 & 0 & 0 \\ -\frac{4}{9} & \frac{3}{2} & 1 & 0 \\ \frac{1}{3} & -3 & -\frac{726}{271} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -9 & 9 & 4 & -4 \\ 0 & 4 & \frac{101}{9} & \frac{25}{9} \\ 0 & 0 & -\frac{271}{18} & \frac{19}{18} \\ 0 & 0 & 0 & \frac{4199}{271} \end{bmatrix}$

3. $$\begin{pmatrix} 5 & -1 & 17 \\ 10 & 10 & -18 \\ 11 & 5 & 19 \end{pmatrix}$$

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

5. $$\sigma = (1,7,3)(2,6,4,5)(8,9), ord = 12, \sigma^{-733} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 5 & 7 & 6 & 4 & 2 & 1 & 9 & 8 \end{pmatrix} = (1,3,7)(2,5,4,6)(8,9)$$

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

7. $\frac{15(-30)^n}{47} + \frac{32 \cdot 64^n}{47}$

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

9. При $\lambda = -4$

10. Определитель: $4 - 38\lambda$, при $\lambda = [2/19]$ ранг равен 3, иначе 4