Ответы: 228 ПИ. Вариант 9

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{6}{7} & 1 & 0 & 0 \\ \frac{4}{7} & -\frac{5}{18} & 1 & 0 \\ \frac{10}{7} & -\frac{50}{9} & -\frac{212}{29} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -7 & -10 & -10 & -7 \\ 0 & -\frac{18}{7} & -\frac{102}{7} & -5 \\ 0 & 0 & \frac{29}{3} & -\frac{115}{18} \\ 0 & 0 & 0 & -\frac{1638}{29} \end{bmatrix}$

3. $$\begin{pmatrix} 16 & -6 & 10 \\ 13 & 3 & 3 \\ 11 & 2 & -7 \end{pmatrix}$$

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

5. $$\sigma = (1,9,7,4)(2,8)(3,5,6), ord = 12, \sigma^{-751} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 9 & 8 & 6 & 1 & 3 & 5 & 4 & 2 & 7 \end{pmatrix} = (1,9,7,4)(2,8)(3,6,5)$$

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

7. $\frac{14(-42)^n}{41} + \frac{27 \cdot 81^n}{41}$

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

9. При $\lambda = 7$

10. Определитель: -81λ, при $\lambda = [0]$ ранг равен 3, иначе 4