Ответы: 224 ПИ. Вариант 24

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{5}{7} & 1 & 0 & 0 \\ 0 & \frac{14}{51} & 1 & 0 \\ \frac{9}{7} & \frac{37}{51} & -\frac{31}{48} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -7 & 1 & 0 & 4 \\ 0 & -\frac{51}{7} & -6 & \frac{69}{7} \\ 0 & 0 & \frac{96}{17} & \frac{56}{17} \\ 0 & 0 & 0 & -\frac{19}{6} \end{bmatrix}$

3. $$\begin{pmatrix} -4 & 6 & -17 \\ 9 & 3 & -9 \\ 14 & 18 & -4 \end{pmatrix}$$

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

5. $$\sigma = (1,3,9,6,5)(2,4)(7,8), ord = 10, \sigma^{-751} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 5 & 4 & 1 & 2 & 6 & 9 & 8 & 7 & 3 \end{pmatrix} = (1,5,6,9,3)(2,4)(7,8)$$

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

7. $\frac{3(-24)^n}{8} + \frac{5 \cdot 40^n}{8}$

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

9. При $\lambda = 7$

10. Определитель: $40\lambda - 42$, при $\lambda = [21/20]$ ранг равен 3, иначе 4