Ответы: 224 ПИ. Вариант 31

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{8}{3} & 1 & 0 & 0 \\ -\frac{7}{3} & -\frac{79}{56} & 1 & 0 \\ -\frac{1}{3} & -\frac{11}{28} & \frac{31}{55} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -3 & -10 & 9 & 3 \\ 0 & \frac{56}{3} & -24 & -2 \\ 0 & 0 & -\frac{55}{7} & -\frac{23}{28} \\ 0 & 0 & 0 & -\frac{291}{220} \end{bmatrix}$

3. $$\begin{pmatrix} 4 & -15 & 15 \\ 14 & -5 & 8 \\ 14 & -16 & -20 \end{pmatrix}$$

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

5. $$\sigma = (1,8)(2,6,9,3,5,4,7), ord = 14, \sigma^{-719} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 8 & 9 & 4 & 2 & 7 & 3 & 6 & 1 & 5 \end{pmatrix} = (1,8)(2,9,5,7,6,3,4)$$

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

7. $\frac{5(-10)^n}{13} + \frac{8 \cdot 16^n}{13}$

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

9. При $\lambda = 2$

10. Определитель: $4\lambda + 10$, при $\lambda = [-5/2]$ ранг равен 3, иначе 4