Ответы: 2210 ПИ. Вариант 34

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{1}{2} & 1 & 0 & 0 \\ 1 & \frac{1}{10} & 1 & 0 \\ -\frac{9}{10} & -\frac{1}{5} & \frac{2}{73} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -10 & 0 & -8 & -4 \\ 0 & -10 & -3 & 5 \\ 0 & 0 & \frac{73}{10} & \frac{17}{2} \\ 0 & 0 & 0 & -\frac{669}{365} \end{bmatrix}$

3. $$\begin{pmatrix} 14 & 18 & 13 \\ 11 & -16 & -11 \\ -8 & 19 & 2 \end{pmatrix}$$

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

5. $$\sigma = (1,6,9)(2,3)(4,5,7,8), ord = 12, \sigma^{-811} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 9 & 3 & 2 & 5 & 7 & 1 & 8 & 4 & 6 \end{pmatrix} = (1,9,6)(2,3)(4,5,7,8)$$

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

7. $\frac{5(-20)^n}{9} + \frac{4 \cdot 16^n}{9}$

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

9. При $\lambda = -5$

10. Определитель: $-12\lambda - 569$, при $\lambda = [-569/12]$ ранг равен 3, иначе 4