Ответы: 226 ПИ. Вариант 38

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -1 & 1 & 0 & 0 \\ \frac{9}{5} & \frac{58}{5} & 1 & 0 \\ \frac{7}{5} & \frac{49}{5} & \frac{142}{179} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 5 & 7 & 0 & -1 \\ 0 & -1 & -3 & 5 \\ 0 & 0 & \frac{179}{5} & -\frac{321}{5} \\ 0 & 0 & 0 & \frac{596}{179} \end{bmatrix}$

3. $$\begin{pmatrix} 10 & -9 & -19 \\ 17 & 18 & 8 \\ -6 & 16 & 1 \end{pmatrix}$$

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

5. $$\sigma = (1,2,7)(3,6,4,5,8,9), ord = 6, \sigma^{-797} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 7 & 6 & 5 & 8 & 4 & 1 & 9 & 3 \end{pmatrix} = (1,2,7)(3,6,4,5,8,9)$$

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

7. $-\frac{16 \cdot 16^n}{19} + \frac{35 \cdot 35^n}{19}$

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

9. При $\lambda = -8$

10. Определитель: $43\lambda - 170$, при $\lambda = [170/43]$ ранг равен 3, иначе 4