Ответы: 225 ПИ. Вариант 20

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{6}{5} & 1 & 0 & 0 \\ \frac{1}{5} & \frac{46}{31} & 1 & 0 \\ -\frac{4}{5} & -\frac{14}{31} & \frac{7}{8} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 5 & -1 & 6 & 6 \\ 0 & \frac{31}{5} & -\frac{56}{5} & -\frac{6}{5} \\ 0 & 0 & \frac{168}{31} & -\frac{261}{31} \\ 0 & 0 & 0 & \frac{69}{8} \end{bmatrix}$

3. $$\begin{pmatrix} -18 & 3 & -7 \\ 19 & -3 & -11 \\ -6 & -14 & 15 \end{pmatrix}$$

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

5. $$\sigma = (1,8,2,5,3,9,7)(4,6), ord = 14, \sigma^{-743} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 7 & 8 & 5 & 6 & 2 & 4 & 9 & 1 & 3 \end{pmatrix} = (1,7,9,3,5,2,8)(4,6)$$

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

7. $\frac{9(-18)^n}{13} + \frac{4 \cdot 8^n}{13}$

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

9. При $\lambda = 7$

10. Определитель: -723, при $\lambda = []$ ранг равен 3, иначе 4