Ответы: 221 ПИ. Вариант 12

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{1}{2} & 1 & 0 & 0 \\ -\frac{9}{4} & \frac{1}{5} & 1 & 0 \\ -\frac{7}{4} & \frac{6}{5} & \frac{31}{136} & 1 \end{bmatrix}, U = \begin{bmatrix} -4 & 0 & 8 & -2 \\ 0 & 5 & -1 & -8 \\ 0 & 0 & \frac{136}{5} & \frac{51}{10} \\ 0 & 0 & 0 & \frac{15}{16} \end{bmatrix}$

3. $$\begin{pmatrix} 2 & 4 & 16 \\ 6 & 19 & -10 \\ 16 & -17 & -4 \end{pmatrix}$$

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

5. $$\sigma = (1,5,9,3,7,8)(2,6,4), ord = 6, \sigma^{-733} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 8 & 4 & 9 & 6 & 1 & 2 & 3 & 7 & 5 \end{pmatrix} = (1,8,7,3,9,5)(2,4,6)$$

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

7. брак

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

9. При $\lambda = -10$

10. Определитель: $473-32\lambda$, при $\lambda = [473/32]$ ранг равен 3, иначе 4