Ответы: 224 ПИ. Вариант 18

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{6}{5} & 1 & 0 & 0 \\ \frac{6}{5} & \frac{71}{41} & 1 & 0 \\ \frac{3}{5} & \frac{18}{41} & -\frac{189}{382} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -5 & -6 & 6 & -2 \\ 0 & \frac{41}{5} & \frac{9}{5} & \frac{32}{5} \\ 0 & 0 & -\frac{382}{41} & -\frac{438}{41} \\ 0 & 0 & 0 & -\frac{362}{191} \end{bmatrix}$

3. $$\begin{pmatrix} 3 & 16 & 14 \\ -9 & -7 & -8 \\ -10 & 4 & -7 \end{pmatrix}$$

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

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

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

7. брак

8. $-3 + -3 * x + 0 * x^2 + -4 * x^3 + 1 * x^4$

9. При $\lambda = -10$

10. Определитель: $65\lambda + 385$, при $\lambda = [-77/13]$ ранг равен 3, иначе 4