Ответы: 229 ПИ. Вариант 17

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{7}{3} & 1 & 0 & 0 \\ \frac{2}{3} & \frac{1}{14} & 1 & 0 \\ -\frac{10}{3} & -\frac{8}{7} & -\frac{47}{34} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 3 & 9 & -9 & 0 \\ 0 & -28 & 16 & -2 \\ 0 & 0 & \frac{34}{7} & -\frac{27}{7} \\ 0 & 0 & 0 & -\frac{565}{34} \end{bmatrix}$

3. $$\begin{pmatrix} 1 & 2 & -12 \\ 7 & 1 & -5 \\ -15 & -1 & -19 \end{pmatrix}$$

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

5. $$\sigma = (1,2,8,4)(3,6,7)(5,9), ord = 12, \sigma^{-751} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 8 & 7 & 1 & 9 & 3 & 6 & 4 & 5 \end{pmatrix} = (1,2,8,4)(3,7,6)(5,9)$$

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

7. $\frac{20 \cdot 60^n}{17} - \frac{3 \cdot 9^n}{17}$

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

9. При $\lambda = 7$

10. Определитель: $14\lambda - 505$, при $\lambda = [505/14]$ ранг равен 3, иначе 4