Ответы: 226 ПИ. Вариант 44

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{3}{2} & 1 & 0 & 0 \\ 5 & -\frac{26}{15} & 1 & 0 \\ -4 & \frac{8}{3} & -\frac{85}{56} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -2 & 3 & 0 & -8 \\ 0 & \frac{15}{2} & -2 & -17 \\ 0 & 0 & -\frac{112}{15} & \frac{263}{15} \\ 0 & 0 & 0 & \frac{1901}{56} \end{bmatrix}$

3. $$\begin{pmatrix} 2 & 4 & 16 \\ -15 & -9 & -3 \\ 12 & 5 & -20 \end{pmatrix}$$

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

5. $$\sigma = (1,2,4,7,8)(3,9,5,6), ord = 20, \sigma^{-787} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 7 & 8 & 9 & 1 & 6 & 3 & 2 & 4 & 5 \end{pmatrix} = (1,7,2,8,4)(3,9,5,6)$$

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

7. $-\frac{3 \cdot 3^n}{29} + \frac{32 \cdot 32^n}{29}$

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

9. При $\lambda = -1$

10. Определитель: $30 - 6\lambda$, при $\lambda = [5]$ ранг равен 3, иначе 4