Ответы: 222 ПИ. Вариант 8

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{8}{3} & 1 & 0 & 0 \\ \frac{10}{3} & \frac{20}{13} & 1 & 0 \\ \frac{7}{3} & -\frac{4}{13} & -\frac{305}{121} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -3 & -2 & 4 & 5 \\ 0 & \frac{13}{3} & -\frac{50}{3} & -\frac{34}{3} \\ 0 & 0 & \frac{121}{13} & \frac{49}{13} \\ 0 & 0 & 0 & -\frac{1652}{121} \end{bmatrix}$

3.
$$\begin{pmatrix} 13 & -7 & 4 \\ -15 & 14 & 2 \\ -8 & -15 & -16 \end{pmatrix}$$

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

5.
$$\sigma = (1,5,2,3,8,6,4)(7,9), ord = 14, \sigma^{-823} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 3 & 6 & 4 & 2 & 8 & 5 & 9 & 1 & 7 \end{pmatrix} = (1,3,4,2,6,5,8)(7,9)$$

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

7. $\frac{7(-42)^n}{11} + \frac{4 \cdot 24^n}{11}$

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

9. При $\lambda = 0$

10. Определитель: $190 - 20\lambda$, при $\lambda = [19/2]$ ранг равен 3, иначе 4