Ответы: 2210 ПИ. Вариант 18

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{7}{6} & 1 & 0 & 0 \\ \frac{7}{6} & \frac{11}{5} & 1 & 0 \\ -\frac{5}{6} & -5 & -\frac{165}{64} & 1 \end{bmatrix}$, $U = \begin{bmatrix} -6 & -4 & -7 & -5 \\ 0 & \frac{5}{3} & \frac{49}{6} & -\frac{19}{6} \\ 0 & 0 & -\frac{64}{5} & \frac{34}{5} \\ 0 & 0 & 0 & -\frac{271}{32} \end{bmatrix}$

3. $$\begin{pmatrix} -1 & 8 & 9 \\ -1 & 17 & -3 \\ 3 & -18 & 14 \end{pmatrix}$$

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

5. $$\sigma = (1,5,9,2,7)(3,8)(4,6), ord = 10, \sigma^{-727} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 5 & 8 & 6 & 7 & 4 & 9 & 3 & 1 \end{pmatrix} = (1,2,5,7,9)(3,8)(4,6)$$

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

7. $-\frac{24(-48)^n}{11} + \frac{35(-70)^n}{11}$

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

9. При $\lambda = 3$

10. Определитель: $-12\lambda - 147$, при $\lambda = [-49/4]$ ранг равен 3, иначе 4