Ответы: 222 ПИ. Вариант 19

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ -\frac{5}{9} & 1 & 0 & 0 \\ -\frac{4}{9} & -\frac{35}{8} & 1 & 0 \\ \frac{2}{3} & -\frac{3}{4} & -\frac{30}{329} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 9 & -4 & 4 & -10 \\ 0 & \frac{16}{9} & \frac{83}{9} & -\frac{68}{9} \\ 0 & 0 & \frac{329}{8} & -\frac{75}{2} \\ 0 & 0 & 0 & -\frac{4086}{329} \end{bmatrix}$

3. $$\begin{pmatrix} 6 & -14 & 0 \\ -12 & 1 & 3 \\ -12 & 4 & -1 \end{pmatrix}$$

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

5. $$\sigma = (1,3,5,4,8,2,6)(7,9), ord = 14, \sigma^{-821} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 2 & 4 & 6 & 3 & 1 & 8 & 9 & 5 & 7 \end{pmatrix} = (1,2,4,3,6,8,5)(7,9)$$

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

7. $\frac{28(-56)^n}{25} - \frac{3(-6)^n}{25}$

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

9. При $\lambda = 5$

10. Определитель: $8\lambda - 138$, при $\lambda = [69/4]$ ранг равен 3, иначе 4