Ответы: 225 ПИ. Вариант 33

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{8}{9} & 1 & 0 & 0 \\ -\frac{2}{3} & \frac{3}{11} & 1 & 0 \\ -1 & -\frac{135}{22} & \frac{791}{24} & 1 \end{bmatrix}, U = \begin{bmatrix} -9 & -5 & -5 & 9 \\ 0 & \frac{22}{9} & -\frac{41}{9} & 0 \\ 0 & 0 & -\frac{12}{11} & 15 \\ 0 & 0 & 0 & -\frac{3811}{8} \end{bmatrix}$

3. $$\begin{pmatrix} 6 & 10 & -16 \\ 15 & 4 & -18 \\ -12 & 19 & -3 \end{pmatrix}$$

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

5. $$\sigma = (1,6,4,2,9,3,8)(5,7), ord = 14, \sigma^{-811} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 6 & 9 & 8 & 2 & 7 & 4 & 5 & 1 & 3 \end{pmatrix} = (1,6,4,2,9,3,8)(5,7)$$

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

7. $\frac{9(-9)^n}{17} + \frac{8 \cdot 8^n}{17}$

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

9. При $\lambda = 9$

10. Определитель: $500 - 16\lambda$, при $\lambda = [125/4]$ ранг равен 3, иначе 4