Ответы: 226 ПИ. Вариант 32

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

2. $L = \begin{bmatrix} 1 & 0 & 0 & 0 \\ \frac{3}{7} & 1 & 0 & 0 \\ 0 & \frac{7}{5} & 1 & 0 \\ \frac{9}{7} & -\frac{109}{15} & -\frac{677}{3} & 1 \end{bmatrix}$, $U = \begin{bmatrix} 7 & 9 & 5 & -1 \\ 0 & \frac{15}{7} & \frac{41}{7} & \frac{17}{7} \\ 0 & 0 & -\frac{1}{5} & -\frac{47}{5} \\ 0 & 0 & 0 & -\frac{6289}{3} \end{bmatrix}$

3.
$$\begin{pmatrix} 0 & 9 & 1 \\ 17 & 17 & 19 \\ 18 & -5 & -3 \end{pmatrix}$$

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

5.
$$\sigma = (1,8,9,4,6,3,7)(2,5), ord = 14, \sigma^{-787} = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 6 & 5 & 9 & 1 & 2 & 8 & 4 & 3 & 7 \end{pmatrix} = (1,6,8,3,9,7,4)(2,5)$$

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

7. $-(-4)^n + 2(-8)^n$

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

9. При $\lambda = -7$

10. Определитель: $495 - 10\lambda$, при $\lambda = [99/2]$ ранг равен 3, иначе 4