

Осипко Александер 0362 Вариант 11

1. Order: TPOЯ

2. Order: 000(y), 001(T), 01(y), 100(C), 101(X), 102(z),  
111(P)

3. Order: 10010010<sub>2</sub>; 146<sub>10</sub>

4. Order: (1, 3, 3).

$$1 \quad e=13; m=93 \quad [41, 51, 4, 39]$$

$$1) \quad de = 1 \bmod \varphi(93) \quad \varphi(93) = 60$$

$$13d + 60y = 1$$

$$\begin{array}{r} r & 60 & 13 & 8 & 5 & 3 & 2 & 1 \\ q & & 4 & 1 & 1 & 1 & 1 & \\ d & 0 & 1 & -4 & 5 & -9 & 14 & -23 \end{array}$$

$$d = -23 \bmod 60 = 37$$

$$2) \quad 41^{37} \bmod 93 = 20$$

$$51^{37} \bmod 93 = 18$$

$$4^{37} \bmod 93 = 16$$

$$39^{37} \bmod 93 = 33$$

$$[20, 18, 16, 33]$$

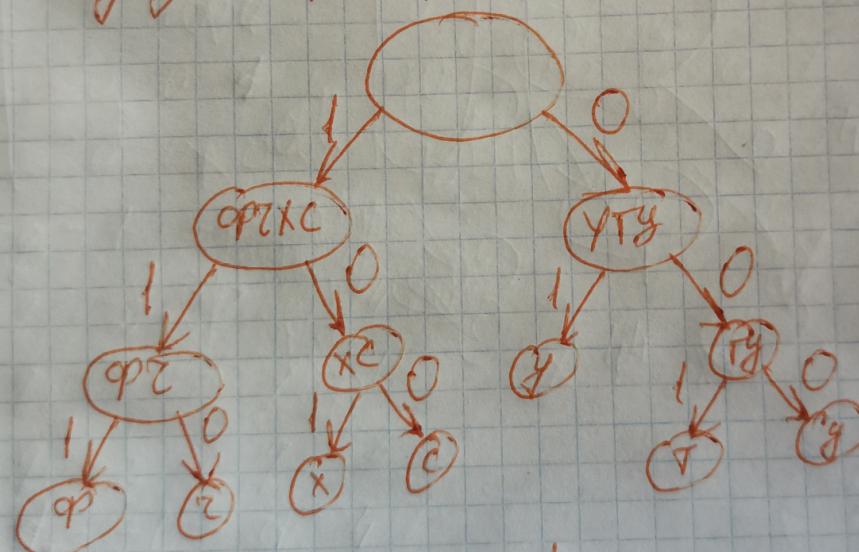
Order: T P O R

A	2	C	19
B	3	T	20
Г	4	P	21
Д	5	φ	22
Е	6	X	23
Ж	7	4	24
И	8	4	25
К	9	Ш	26
Л	10	Ш	27
М	11	6	28
Н	12	6	29
О	13	4	30
Р	14	6	31
С	15	7	32
У	16	10	33
Ф	17	8	34
Х	18		

2. 95(y), 73(gp), 66(z), 60(x), 58(c), 44(T), 43(g)  
 95(y), 87(Ty), 73(gp), 66(z), 60(x), 58(c)  
 118(xc), 95(y), 87(Ty), 73(gp), 66(z)  
 139(gpz), 118(xc), 95(y), 87(Ty)  
 182(yTy), 139(gpz), 118(xc)  
 257(gpzxc), 182(yTy)

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0(yTy), 1(gpzxc)



gp: 111

z: 110

x: 101

c: 100

y: 01

T: 001

g: 000

Q567: 000(g), 001(T), 01(y), 100(c)  
 101(x), 110(z), 111(gp).

3

10010010  
11011011

10010010  
11011011

$$2^1 + 2^4 + 2^7 = 2 + 16 + 128 = \\ - 146$$

Ort bei: 146

$$4 \quad y \quad x \quad q_0 + q_1 x + q_2 x^2 + q_3 x^3 = (d+k)x$$

$$1 \quad 0 \quad q_0 = -d$$

$$2 \quad 1 \quad q_0 + q_1 + q_2 + q_3 = (1-d) \cdot 2$$

$$4 \quad 2 \quad q_0 + 2q_1 + 4q_2 + 8q_3 = (2-d) \cdot 4$$

$$2 \quad 3 \quad q_0 - 2q_1 + 4q_2 - 8q_3 = -2(2+d)$$

$$4 \quad 4 \quad q_0 - q_1 + q_2 - q_3 = -4(1+d)$$

$$q_0 + d = 0$$

$$\left\{ \begin{array}{l} q_0 + q_1 + q_2 + q_3 + 2d = 2 \\ q_0 + 2q_1 + 4q_2 + 8q_3 + 4d = 8 \end{array} \right.$$

$$\left\{ \begin{array}{l} q_0 - 2q_1 + 4q_2 - 8q_3 + 2d = -4 \\ q_0 - q_1 + q_2 - q_3 + 4d = -4 \end{array} \right.$$

$$\left\{ \begin{array}{l} q_0 + q_1 + q_2 + q_3 + 2d = 2 \\ q_0 - 2q_1 + 4q_2 - 8q_3 + 4d = -4 \end{array} \right.$$

$$\left| \begin{array}{ccccc|c} 1 & 0 & 0 & 0 & 1 & 0 \\ 1 & 1 & 1 & 1 & 2 & 2 \\ 1 & 2 & 4 & 8 & 4 & 8 \\ 1 & -2 & 4 & -8 & 2 & -4 \\ 1 & -1 & 1 & -1 & 4 & -4 \end{array} \right| \sim \left| \begin{array}{ccccc|c} 1 & 0 & 0 & 0 & 1 & 0 \\ 0 & 1 & 1 & 1 & 1 & 2 \\ 0 & 2 & 4 & 8 & 3 & 8 \\ 0 & -2 & 4 & -8 & 1 & -7 \\ 0 & -1 & 1 & -1 & 3 & -4 \end{array} \right|$$

$$A \left( \begin{array}{cc|c} 1 & 0 & 0 & 0 & 1 & 0 \\ 0 & 1 & 1 & 1 & 1 & 2 \\ 0 & 0 & 2 & 6 & 1 & 4 \\ 0 & 0 & 6 & -6 & 3 & 0 \\ 0 & 0 & 2 & 0 & 4 & -2 \end{array} \right) \xrightarrow{\text{Gauß}} \left( \begin{array}{cc|c} 1 & 0 & 0 & 0 & 1 & 0 \\ 0 & 1 & 0 & 0 & 0,5 & 1 \\ 0 & 0 & 1 & 0 & 0,5 & 0,5 \\ 0 & 0 & 0 & 1 & 0 & 0,5 \\ 0 & 0 & 0 & 0 & 3 & -3 \end{array} \right) \xrightarrow{\text{Gauß}} \left( \begin{array}{cc|c} 1 & 0 & 0 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 & 0 & 1,5 \\ 0 & 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & 0 & 0,5 \\ 0 & 0 & 0 & 0 & 1 & -1 \end{array} \right)$$

$$q_0 = 1 \Rightarrow q_0 = 1$$

$$q_1 = \frac{3}{2} \Rightarrow q_1 = 4$$

$$q_2 = 1 \Rightarrow q_2 = 1 \quad X - 4 = X + 1$$

$$q_3 = \frac{1}{2} \Rightarrow q_3 = 3$$

$$q_4 = -1 \Rightarrow d = 4$$

$$\begin{array}{r} 3x^3 + x^2 + 4x + 1 \\ 3x^3 + 3x^2 \\ \hline 0 + 3x^2 + 4x + 1 \\ 3x^2 + 3x \\ \hline 0 + x + 1 \\ x + 1 \\ \hline 0 \end{array} \quad (1, 3, 3)$$

Outfit: (1, 3, 3)