

Амуров 0362

1 X 1 A M

3 2 4 3

 $4(2, 2, 4)$

21

$$l = 23$$
$$m = 85$$

$(82; 72; 43; 74)$

$$de = 1 \pmod{\varphi(m)}$$

$$\varphi(85) = \varphi(5) \cdot \varphi(17) = 4 \cdot 16 = 64$$

$$(82; 72; 43; 74) \mid 23d = 1 \pmod{64}$$

$$23d + 64y = 1$$

$$\int d = 103$$

$$L_y = -37$$

$$b = 103 \bmod 64 = 39$$

$$82^{39} \bmod 85 = 23$$

$$72^{39} \bmod 85 = 13$$

$$43^{39} \pmod{85} = 2$$

$$74^{39} \bmod 85 = 14$$

А Б В Г Д Е Ё Ж
2 3 4 5 6 7 8

З И Й К Л М Н О
9 10 11 12 13 14 15 16

П Р С Т У Ф Х Ц Ч Ш Щ Ъ
17 18 19 20 21 22 23 24 25 26 27 28

Ы ы 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

XLAM

Amber ~~XXXXXX~~

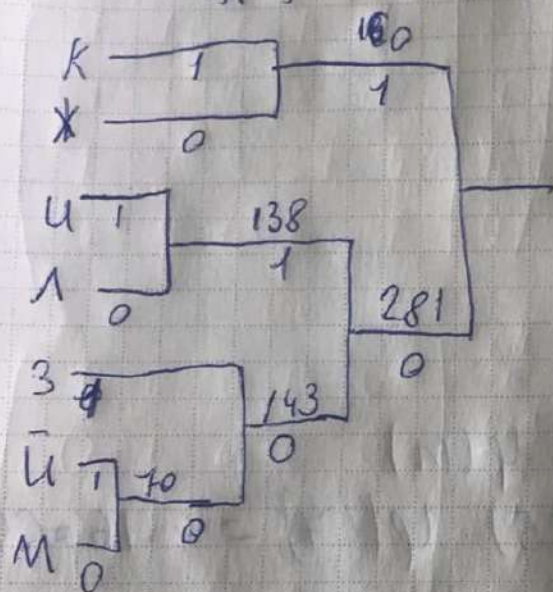
$K(85); X(75); U(74); 3(73); \Lambda(64); M(56); \bar{U}(14)$

$70(M\bar{U})64(\Lambda); 73(3); 74(U); 75(X); 85(K)$

$143(M\bar{U}3)64(\Lambda)74(U); 75(X); 85(K)$

$143(M\bar{U}3)138(\Lambda U)160(XK)$

$281(M\bar{U}3\Lambda U)160(XK)$



Answer:

X	1	0			
3	0	0	1		
U	0	1	1		
\bar{U}	0	0	0	1	
K	1	1			
Λ	0	1	0		
M	0	0	0	0	

n^3

0	1	2	3	4	5	6	7
1	0	0	0	1	0	1	0

- 0) 1
- 1) $1+0=\cancel{0}$
- 2) $1+0+0=\cancel{0}$
- 3) $1+0+0+0=1$
- 4) $1+0+0+0+1=0$

- 5) $1+0+0+0+1+0=\cancel{0}$
- 6) $1+0+0+0+1+0+1=1$
- 7) $1+0+0+0+1+0+1+0=1$

$$\begin{matrix} 7 & 6 & 5 & 4 & 3 & 2 & 1 & 0 \\ 1 & 1 & 1 & 1 & 0 & 0 & 1 & 1 \end{matrix} = 128 + 64 + 32 + 16 + 2 + 1 = 243$$

Answer: 243

n^4

$$\begin{array}{r}
 -2x^3 + 2x^2 + 3x + 1 \mid x+3 \\
 \underline{2x^3 + x^2} \\
 -x^2 + 3x + 1 \\
 \underline{-x^2 + 3x} \\
 1
 \end{array}$$

n4

y	x	
2	0	(1) $x=0 \quad q_0 = -2d$
3	1	(2) $x=1 \quad q_0 + q_1 + q_2 + q_3 = 3(1-d)$
2	2	(3) $x=2 \quad q_0 + 2q_1 + 4q_2 + 3q_3 = 2(2-d)$
4	3	(4) $x=-2 \quad q_0 + 2q_1 + 4q_2 - 3q_3 = 4(-2-d)$
1	4	(5) $x=-1 \quad q_0 + q_1 + q_2 - q_3 = 1(-1-d)$

$$\begin{cases}
 q_0 + 2d = 0 \\
 q_0 + q_1 + q_2 + q_3 + 3d = 3 \\
 q_0 + 2q_1 + 4q_2 + 3q_3 + 2d = 4 \\
 q_0 + 2q_1 + 4q_2 - 3q_3 + 4d = 2 \\
 q_0 - q_1 + q_2 - q_3 + d = -1 \pmod{5} \equiv 4 \pmod{5}
 \end{cases}$$

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

$$d = 4$$

$$q_3 = 4$$

$$q_2 = 1$$

$$q_1 = 4$$

$$q_0 = 2$$

$$\begin{array}{r}
 4x^3 + x^2 + 4x + 2 \mid x-4 \\
 \underline{-4x^3 + 4x^2} \\
 2x^2 + 4x + 2 \\
 \underline{-2x^2 + 2x} \\
 2x + 2 \\
 \underline{2x + 2} \\
 0
 \end{array}$$

answ: (2, 2, 4)