Zad 7

NIE

Text może mieć kilka znaków z tą samą
wagą. W takim przypadku kolejność nie ma znaczenia

Zad 3 a:3 b:1 c:1 d:1

aabcdaa

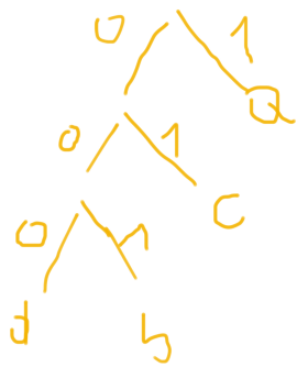
000 001 1 01 1 000 000

b -> 001

c -> 01

d -> 1

a -> 000



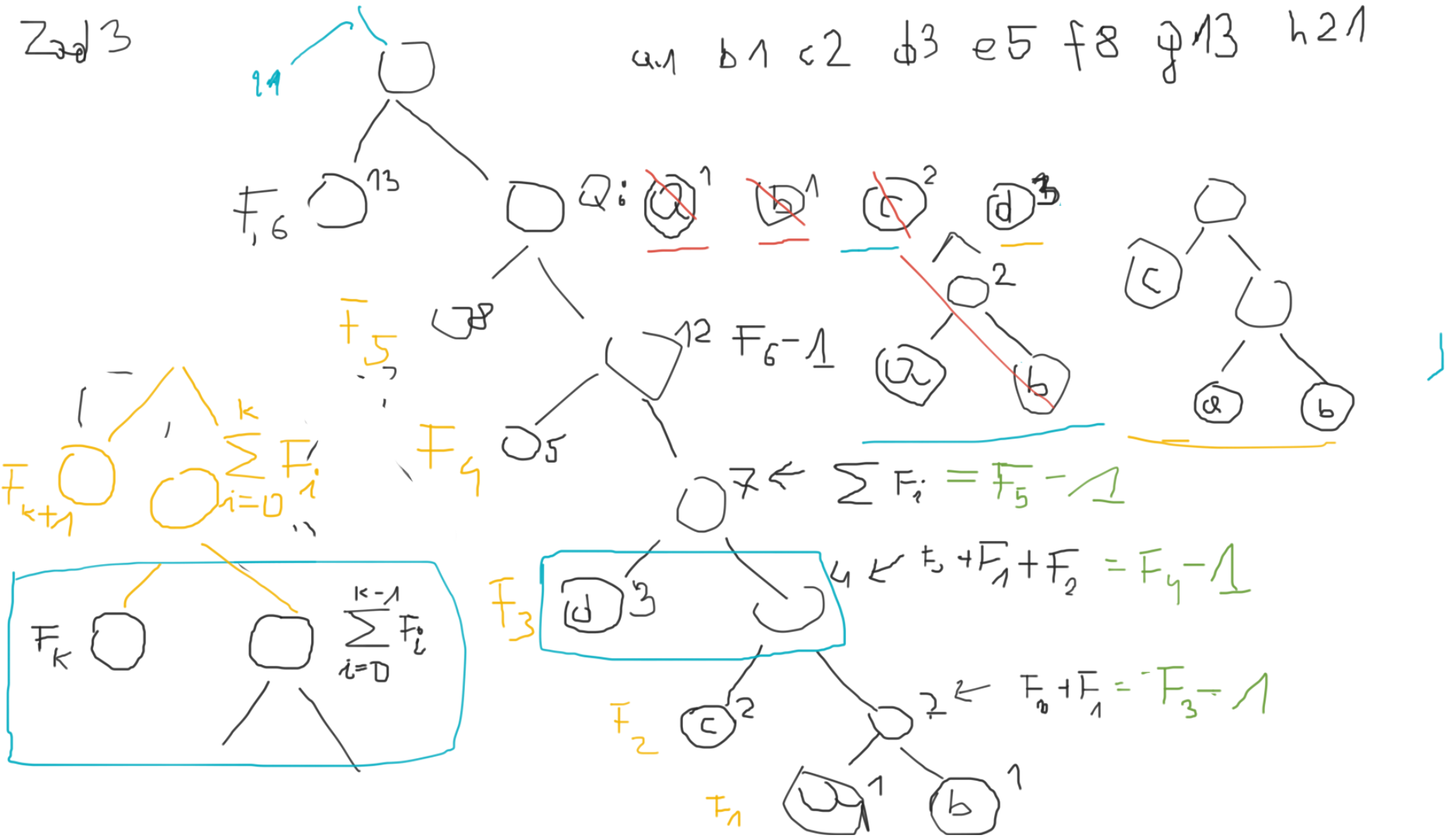
a a b

11001010001

c a d b d c

Zad 3

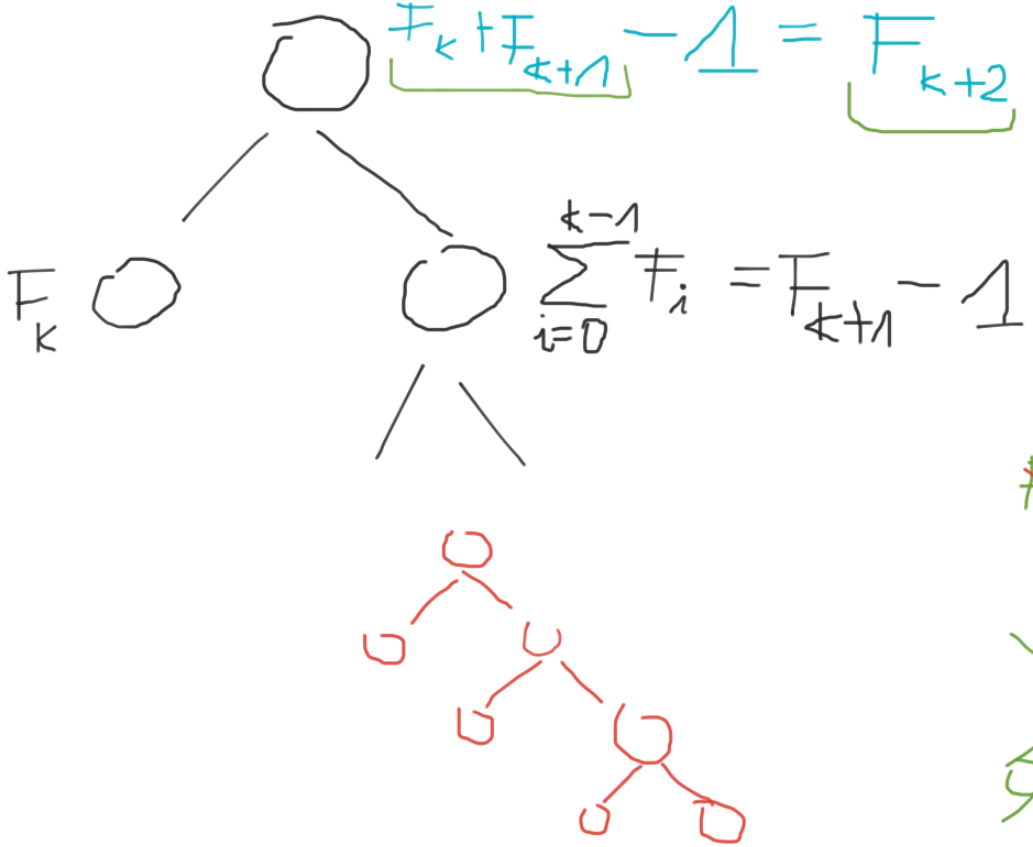
a 1 b 1 c 2 d 3 e 5 f 8 g 13 h 21



2 and 3

$F_0, F_1, \dots, F_k$, F_{k+1}, $F_{k+2} - 1$

$F_{k+2} - 1$



$F_{k+2} > F_{k+2} - 1 > F_{k+1}$

Bază

$$\sum_{i=0}^{0} F_i = F_2 - 1 \qquad L = F_0 = 1 \qquad P = F_2 - 1 = 1 - 1 = 1 \quad L = P$$

$$F_{k+2} = F_k + F_{k+1}$$

Ipoteză ind

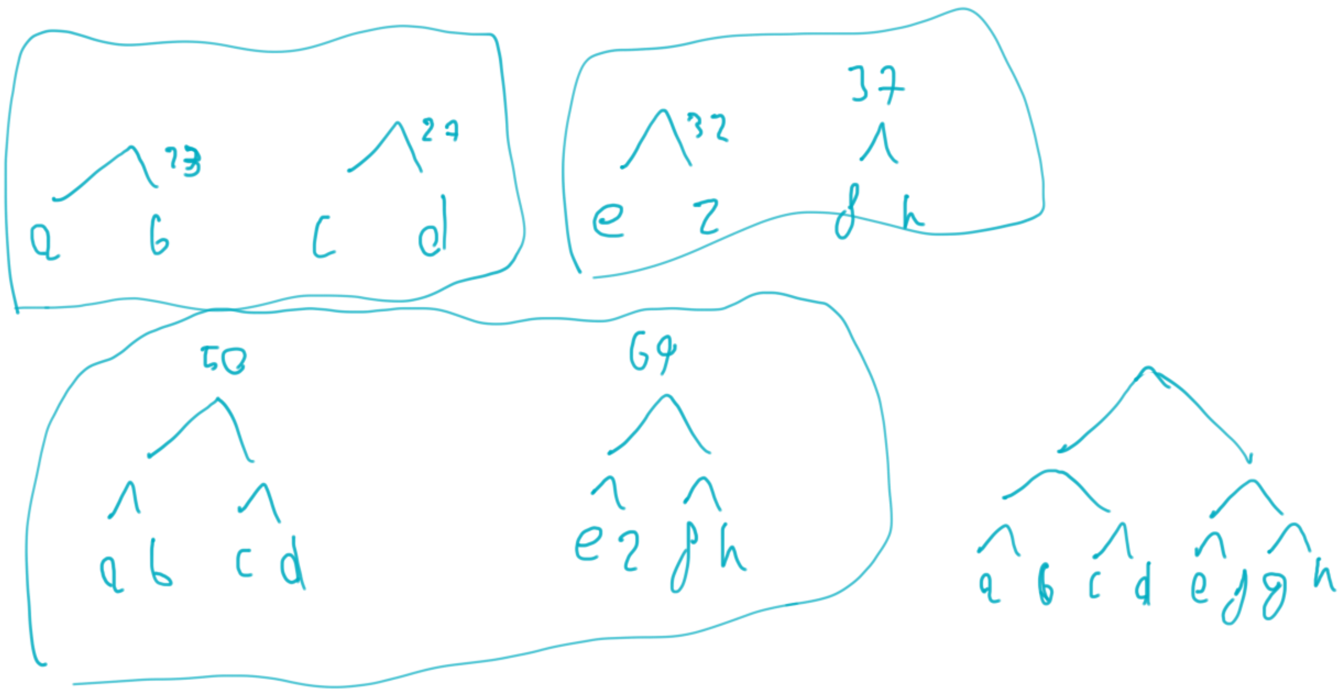
$$\sum_{i=0}^{k} F_i = F_{k+2} - 1 \quad (*)$$

$$\sum_{i=0}^{k+1} F_i = \sum_{i=0}^{k} F_i + F_{k+1} \overset{*}{=} F_{k+2} - 1 + F_{k+1} = F_{k+3} - 1$$

$$F_6 + F_5 = F_7$$

2nd 4

14, 17, 19, 18, 25, 47, 28, 29 || 23, 27, 32, 37, 50, 70



2 ulg 5

$a_1, a_2, a_3, \ldots, a_n$

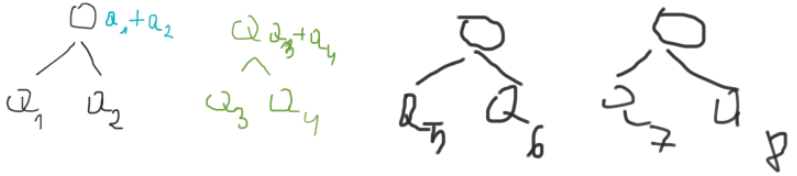
$n = 2^k$

$a_n < 2a_1$

$a_1 \leq a_2 \leq a_3 \leq \ldots \leq a_n$

$$\sum_{i=1}^{2^m} a_i > \sum_{i=2^n-2^{m-1}}^{2^n} a_i$$

$n = 2$

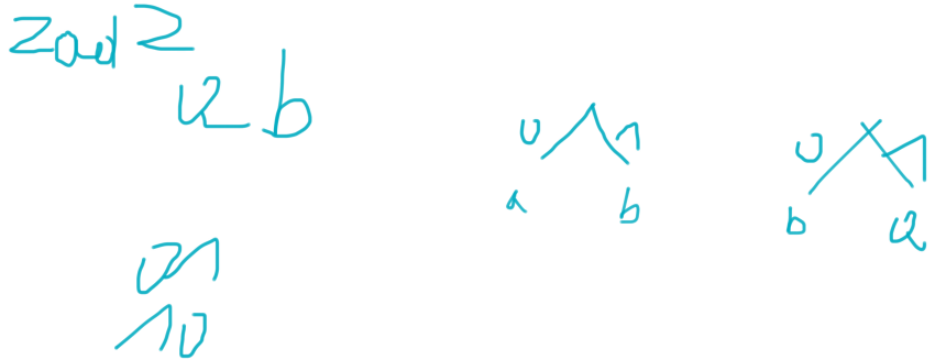


$a_1+a_2 \,/\, a_3+a_4 \,/\, a_5+a_6 / a_7+a_8 \;|\; \ldots \quad a_{16}$

$a_1+a_2 \geq 2a_1 > a_n$

$a_3+a_4 \geq a_1+a_2$

$(a_1+a_2)+(a_3+a_4) \geq 2a_1+2a_1 > a_5+a_8 > a_8+a_7$



5

a: 11
b: 3
c: 3
d: 2
s: 1

1, 2, 3, 3, 11

s a: 1
d b: 01
c: 001

d: 0001
s: 0000

111

38 bit

a) & c)

01|1|01|1|01|1|001|1|001|1|0001|1|1|1|0000|1|0001|1|001|1

b)

3 bit × 20 Zeichen = 60 bit

60 − 38 = 22 bit > $\frac{1}{3}$

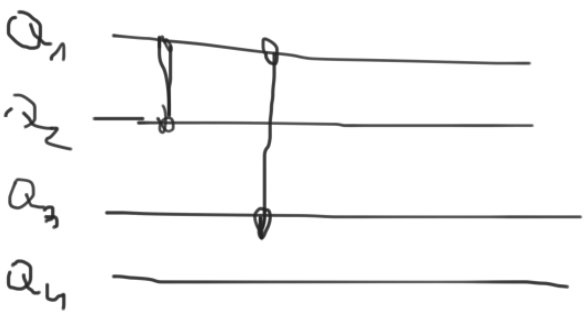
d)

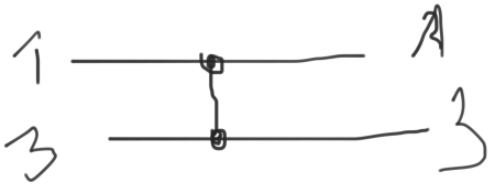
1|001|001|001|00 1|1|001|1|001|1|001|1|1|00 001|1|1|1|0 1|1|001|1|00...

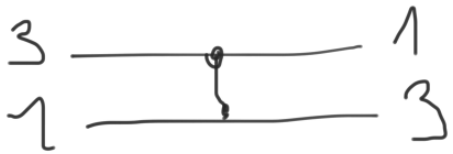
a c c c a c a c aa s aaaa b aa c a X

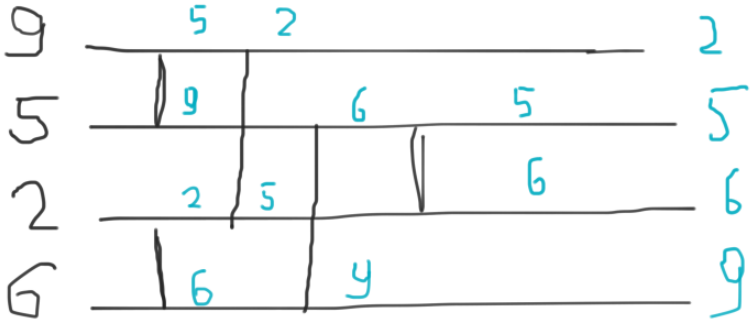

L13

Zad

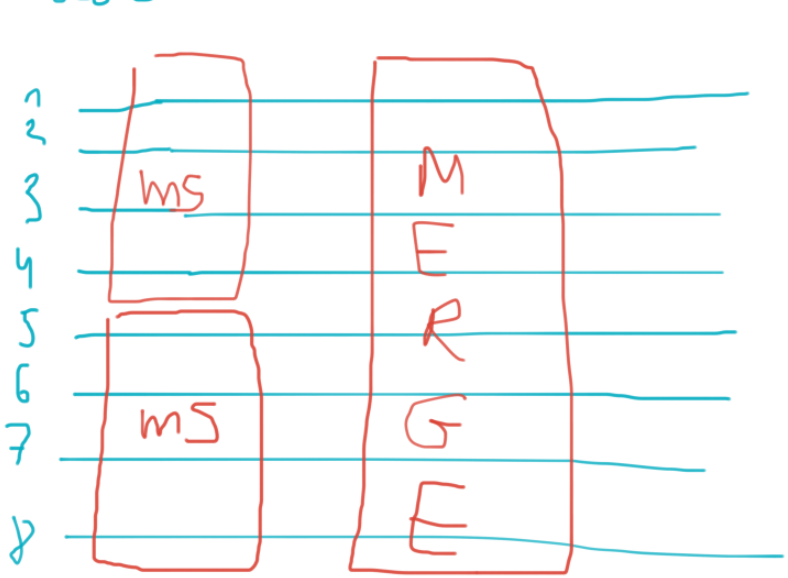


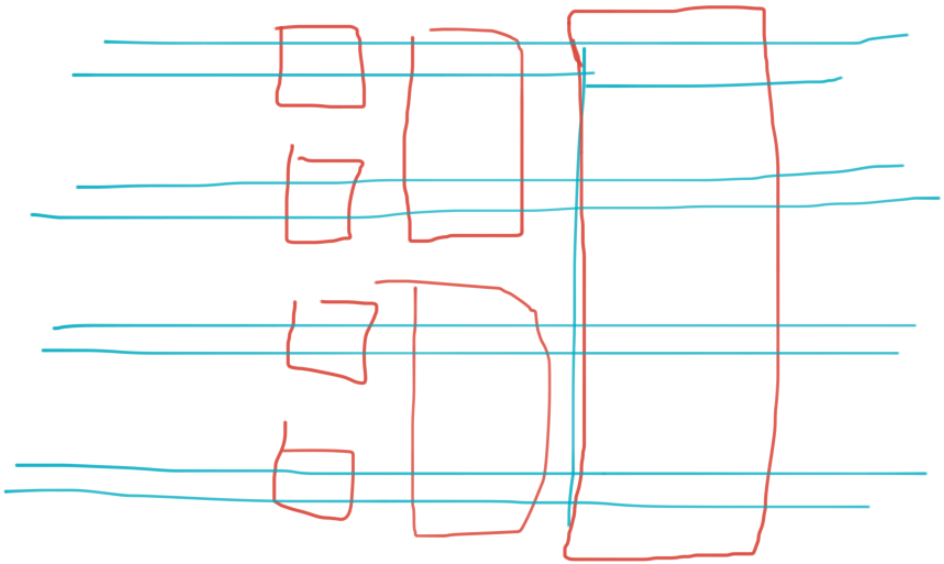






Zad 5





$$f : R \Rightarrow [0,1]$$

$$f(x) = \begin{cases} 1 & x \geq t \\ 0 & x < t \end{cases}$$

2	0	1	1
4	0	0	0
1	1	1	1
3	0	0	1

0
0
0
1
0
1
1
0

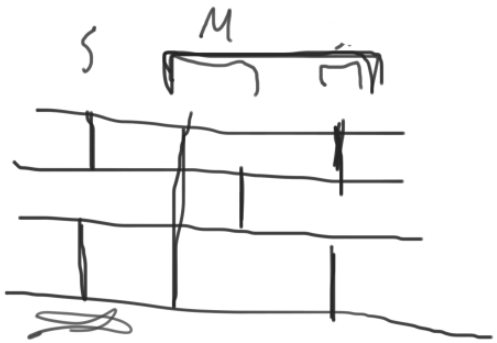
7
0
0
0
0
1
1
1

0011 0011

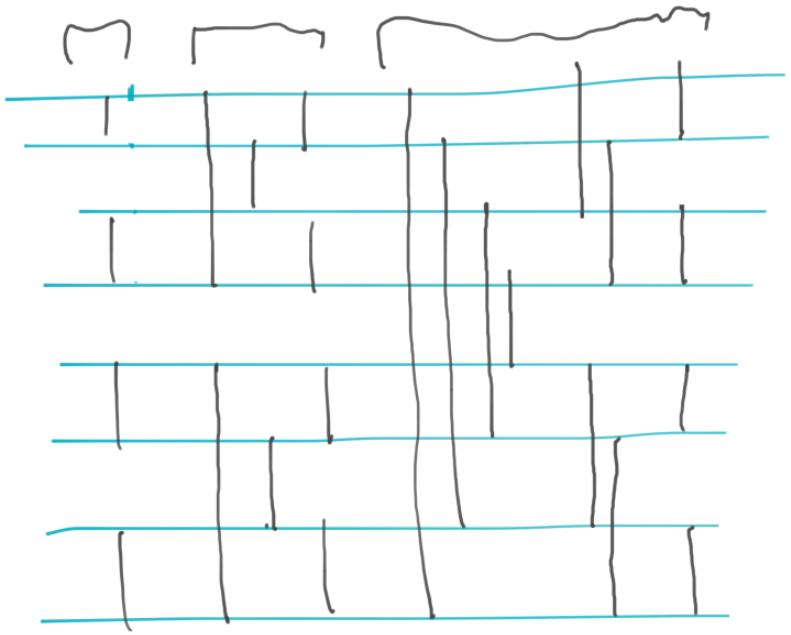
00111000

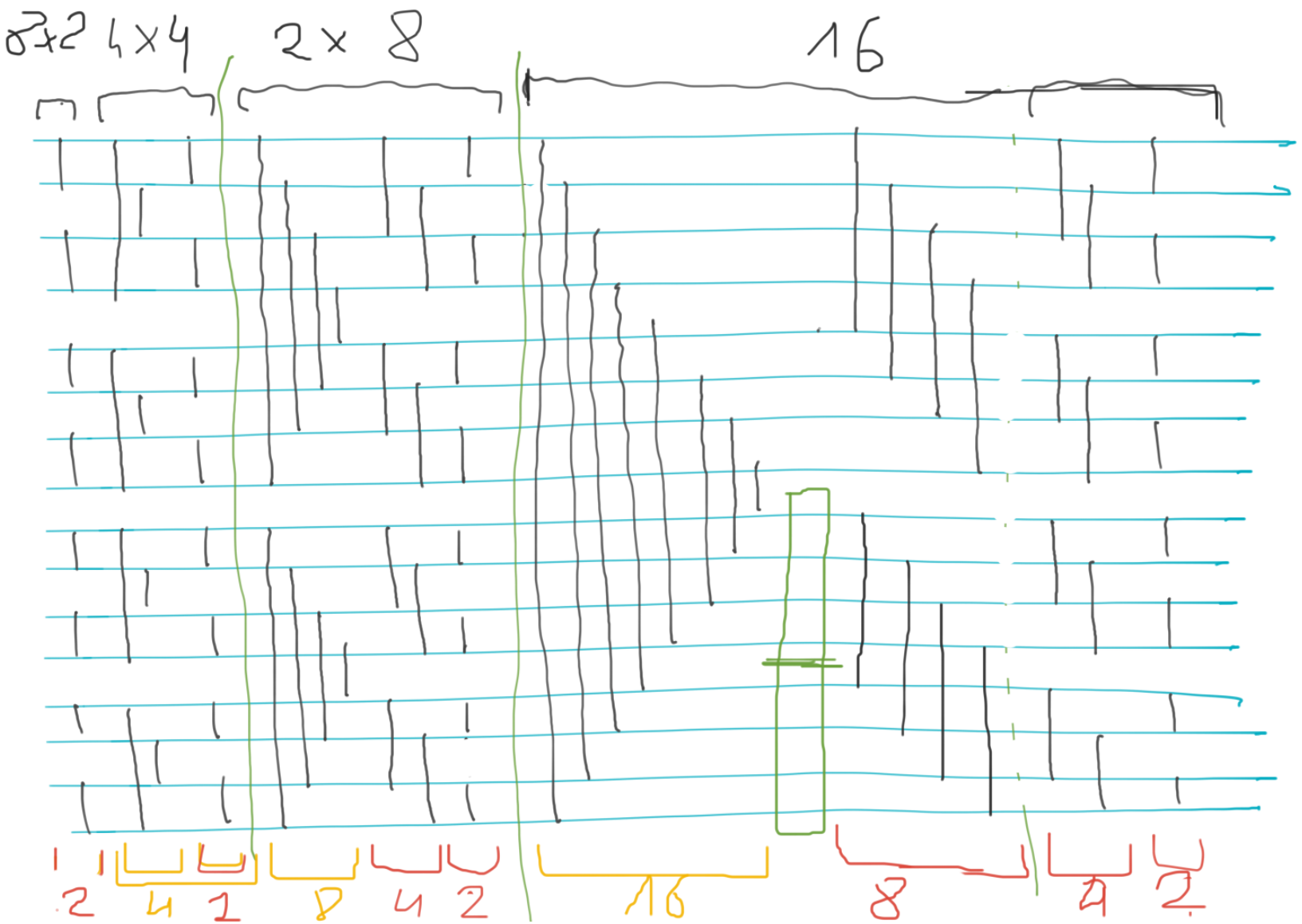
$n = 2$

$n = 4$

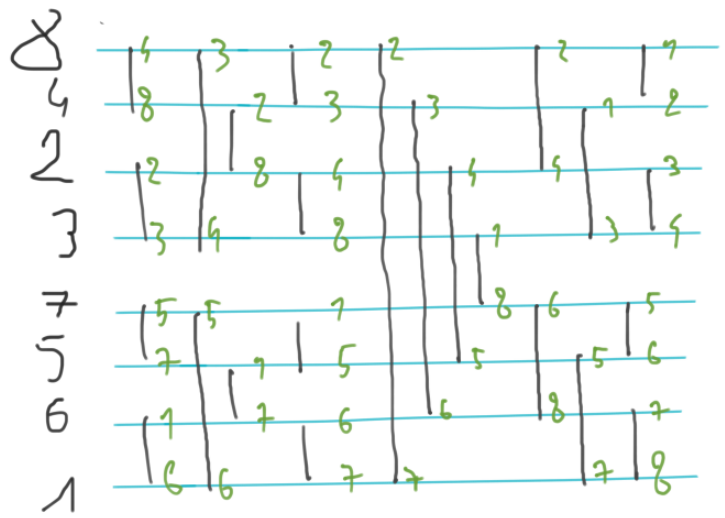


$n = 8$

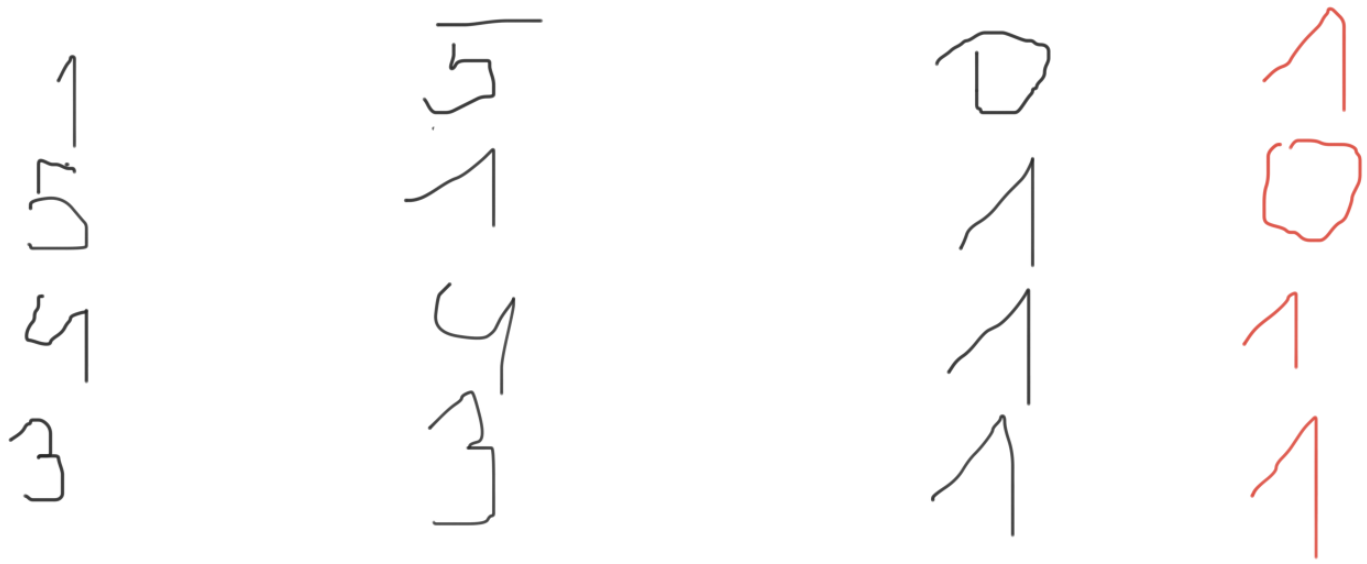



8x2 4x4
2x 8
16
1
2 4 1 8 4 2 16 8 4 2

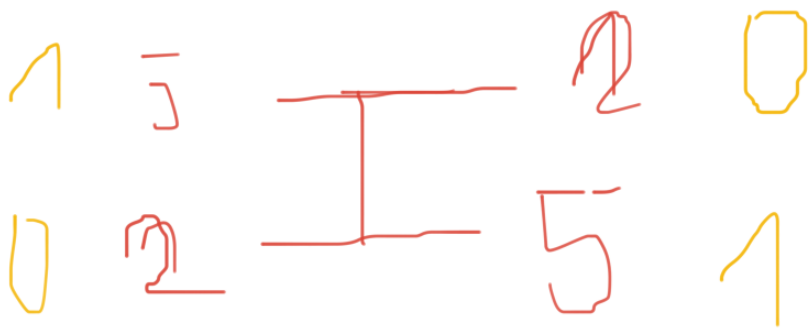
2 od 5

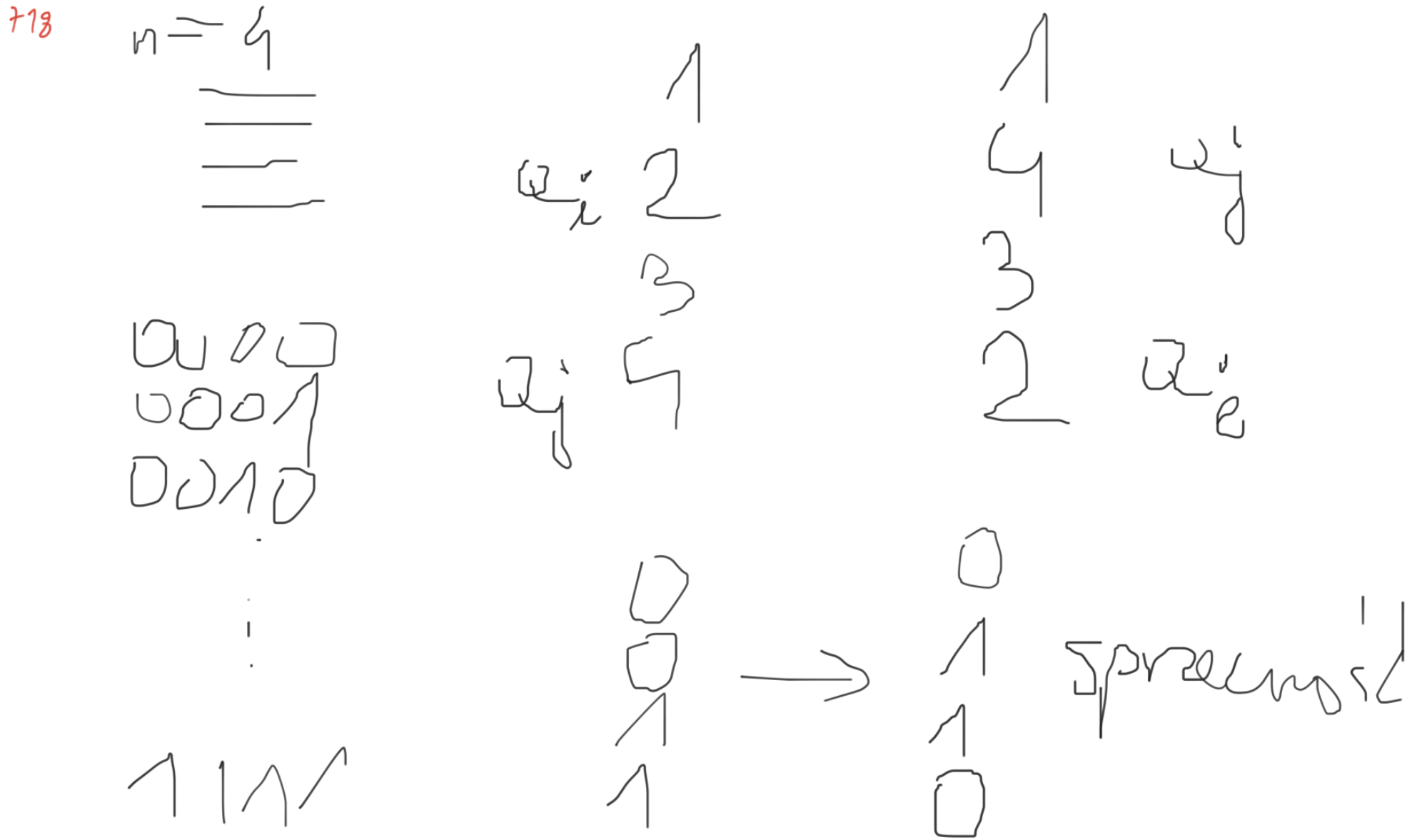


Zad 3 | 5/7 18



$$f(x) = \begin{cases} 1 & x \geq 0 \\ 0 & x < 0 \end{cases}$$




n = 4
spreminjal