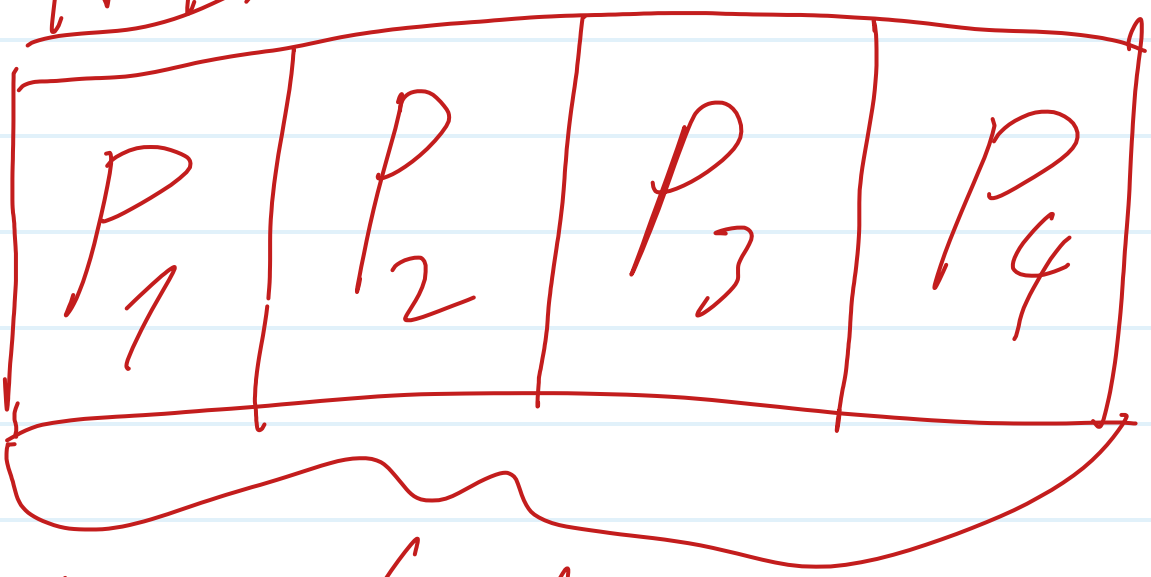
1.) HP 10M 2,5M



$2^{10} = 1K$

$2^{20} = 1M$

$2^{30} = 1G$

$2^{40} = 1T$

10 Ks ← 4 Ks

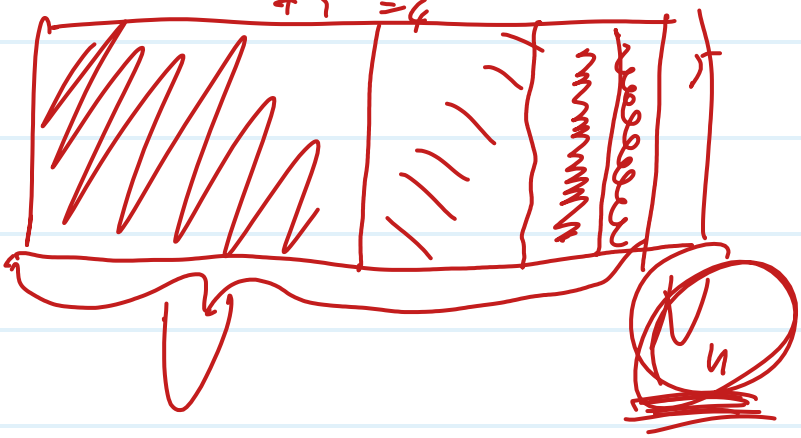
$V = p_u^4$

$p_u = 0,5^-$

1 + 1 = 2

+1 = 3

+1 = 4



2. $N_u = 1 - V$

$N_u = 1 - 0,5^{-4} = 0,0625^-$

V prijemne je nemožno 6,25 % času prenosa.

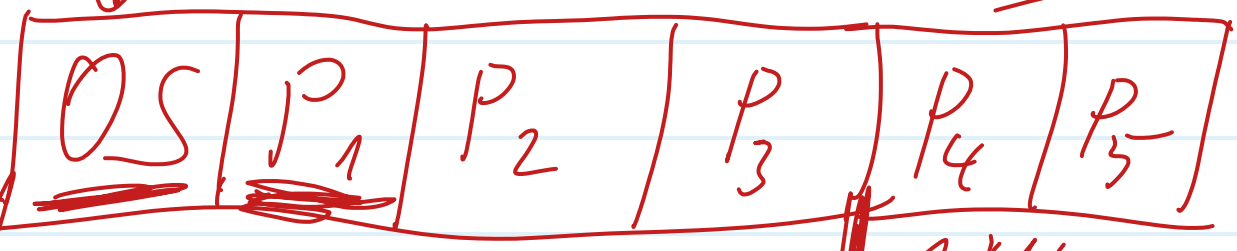
2) T $0{,}5+0{,}5b$ | 1 | $16+0{,}5^T$ $0{,}5b+0{,}5^T$ — 3 | 2 — 46

a) $0{,}138 \rightarrow 13{,}8\%$

b) 214 B

$512 \cdot 2^{10} = 2^{20} = 4 \cdot 512 \cdot 2^{10}$

a)



$p = 0{,}6$ $V_3 = 1 - p^3$

$V_5 = 1 - p^5$

$V_i = V_5 - V_3 = 0{,}92224 - 0{,}784$

$= 0{,}138$ $13{,}8\%$

b) $V \geq 0{,}99$

$p = 0{,}6 \qquad n = ?$

$V \leq 1 - p^n$

$0{,}99 \quad 1 - 0{,}6^{10}$

$0{,}99 \quad 0{,}9939$

$V + p^n \leq 1$

$\log(V) + \log(p)^n \geq \log 1$

$\log V + n \cdot \log p \geq 0$

$\log V \geq n \cdot \log p$

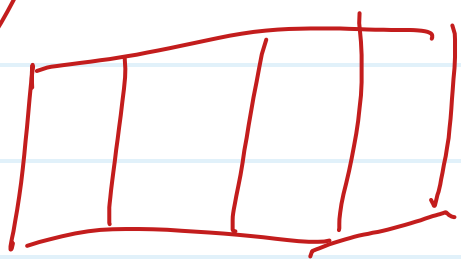
$$\frac{\log V}{\log p} \leq n$$

$$\frac{\log 0{,}99}{\log 0{,}6} \leq n$$

$0{,}015 \leq n \qquad n \geq 10$

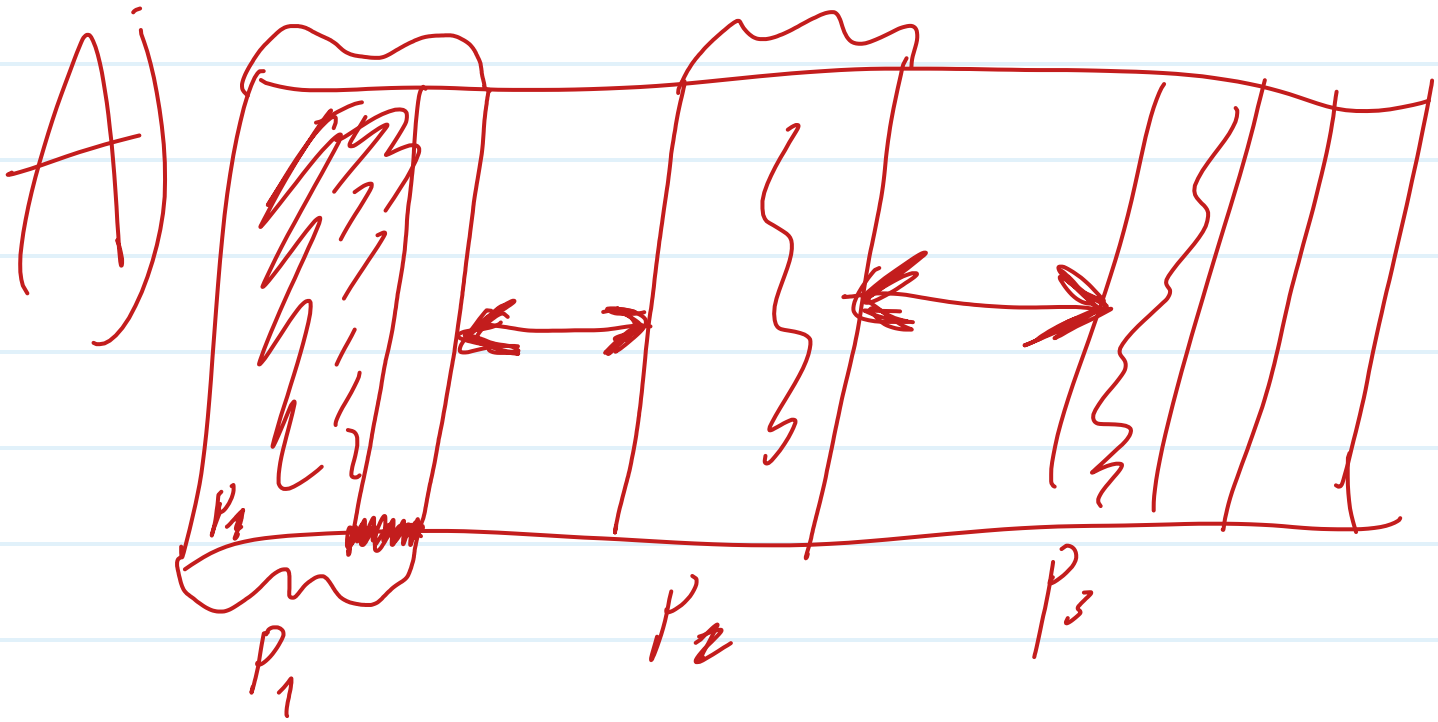
$0{,}999 \leq 1 - p^{9}$

$0{,}99 \neq 0{,}989$



б) 3,5 Гц

А)



3.

$$V + O_s = 1\,MB$$

$$V = 0{,}4 \cdot O_s$$

O_s

[MB]

$$0{,}4 \cdot O_s + O_s = 1\,MB$$

$$1{,}4\,O_s = 1\,MB$$

1 bit
1 byte

$$O_s = 0{,}714 \cdot 2^{20} = 748683{,}264\,b$$

$748683,264 \; 0,5 \cdot 10^{-6} s =$

$= 0,3744 9 s \doteq t$

czas potrzebny na kondensację

$T = 1 s$

$K = \frac{t}{T} = \frac{0,3744 9 s}{1 s} = 0,3749$

a) $37,449\%$

b) $k = 0,1$

$T > \frac{t}{K} [s]$

$T > 2$

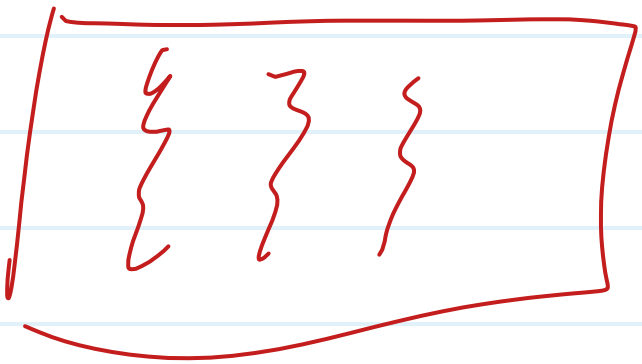
$t = 0,37449$

$T > 3,7449 s$

4. $i = 1 \cdot 10^{-6}\ s$

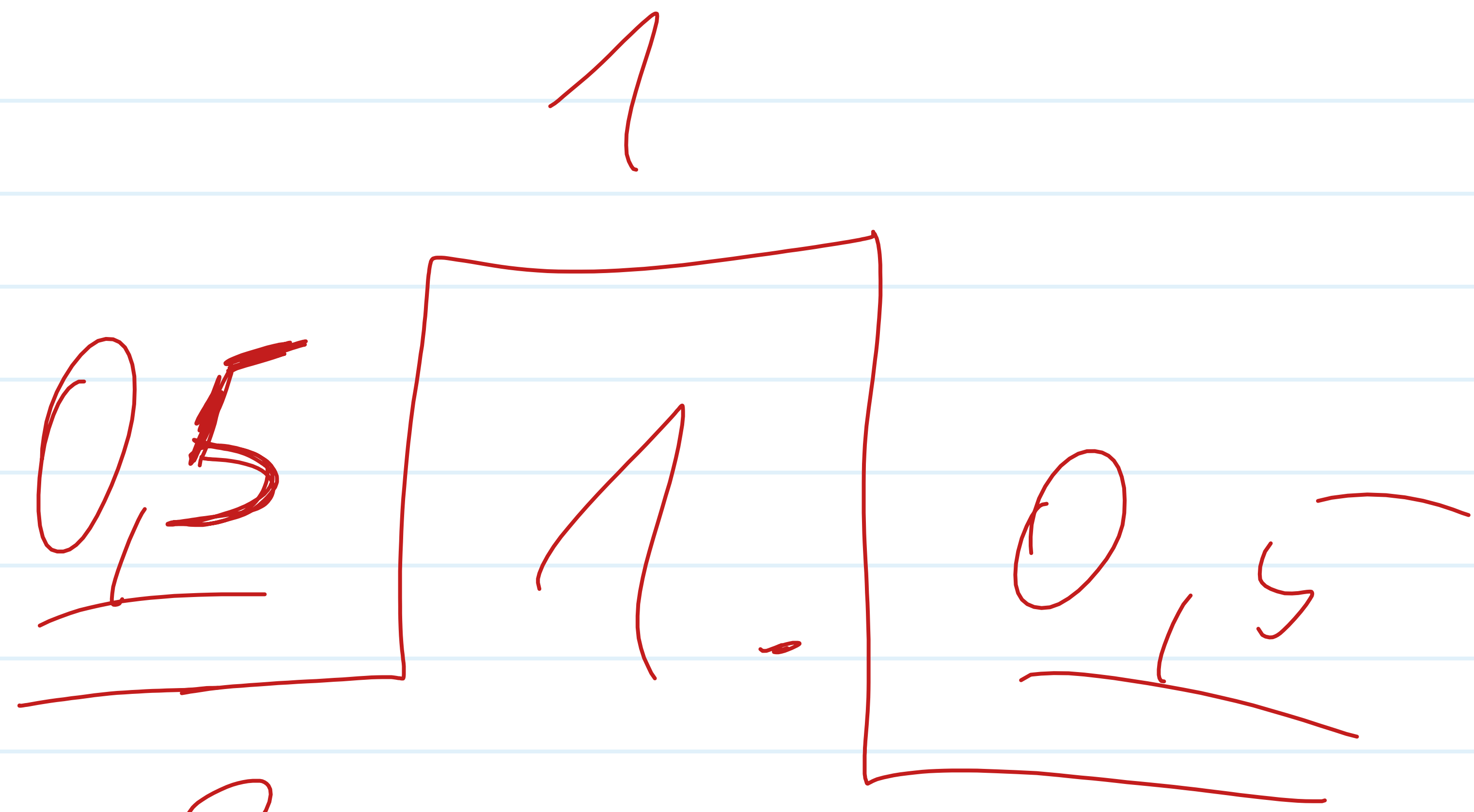
$P_f = +n$

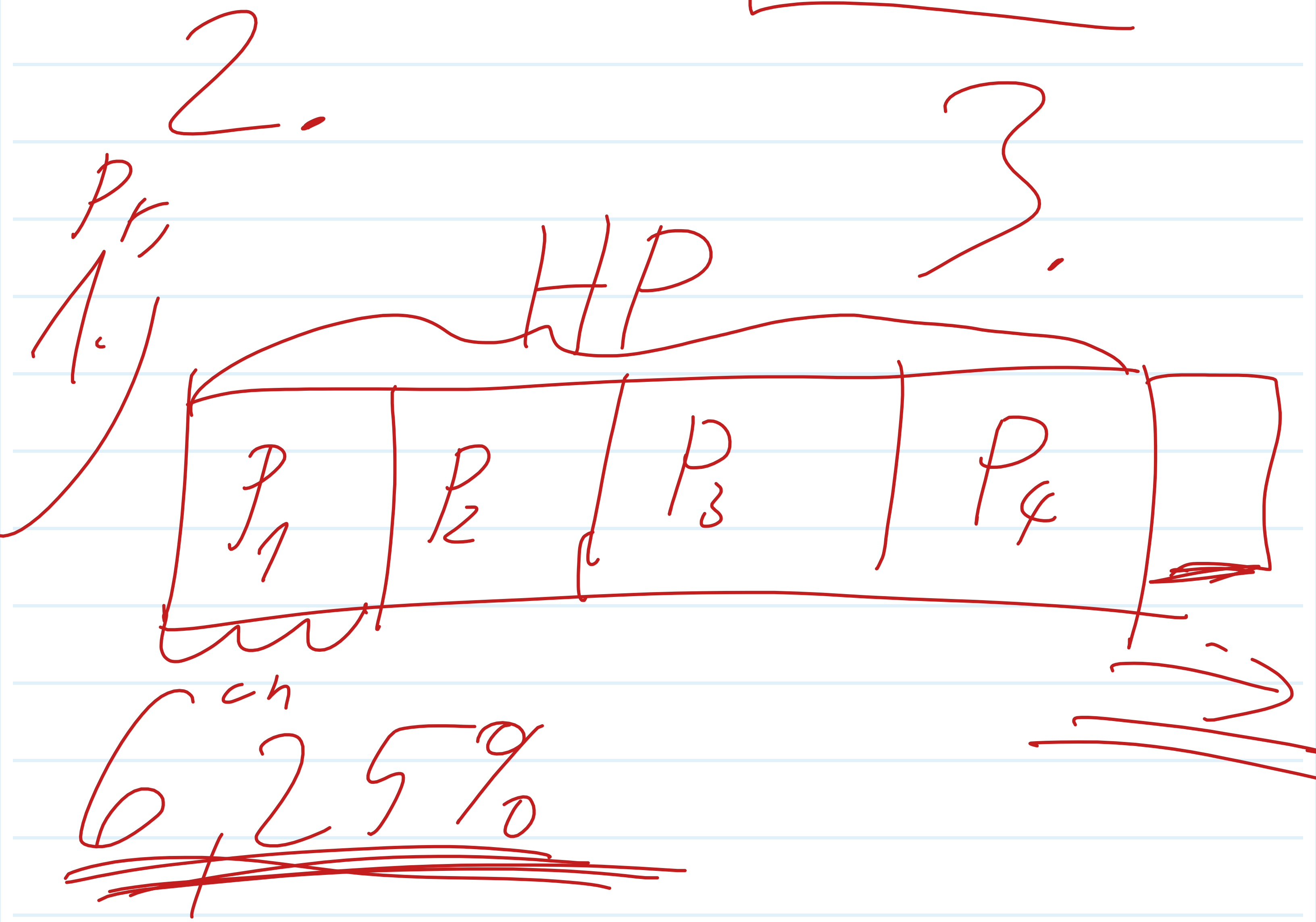
K



$i + i + i + i + i_K + n$

$\frac{K+n}{K} = 1 + \frac{n}{K}$


1
0,5
1.
0,5


2.
3.
HP
P_1
P_2
P_3
P_4
62,5%

a) $U = 1 - p^4$

$p = 0{,}5$

$U = 1 - 0{,}0625$

$U = 0{,}9375$

93,75 %

$A_U = 1 - U = 6{,}25\,\%$

$= 0{,}0625$

2. a) ?

b) ?

$K = 1^{10}$

$M = 2^{20}$

$G = 2^{30}$

$T = 2^{40}$

a) 13,824 % = 0,5

b) > 10 = 0,5

$\frac{1}{2} = 3{,}5\,MB$

OS	P_1	P_2	P_3

0,5 MB

512 KB

2 MB

a) $p = 0,6$

$$V = 1 - p^{n}$$

$n_1 = 3 \qquad V_1 = 1 - p^{n_1}$

$n_2 = 5 \qquad V_2 = 1 - p^{n_2}$

$$V_i = V_2 - V_1$$

$$V_1 = (1 - p^{n_2}) - (1 - p^{n_1})$$

$$V_1 = 1 - 0,6^5 - 1 + 0,6^3 = 0,13824$$

$13,824\ \%$

b) $n = ?$

$$V \geq 0{,}99$$

$$1 - p^n \geq 0{,}99 \quad / -1$$

$$-p^n \geq -0{,}01 \quad / \cdot (-1)$$

$$p^n \leq 0{,}01 \quad / \log$$

$$\log p^n \leq \log 0{,}01$$

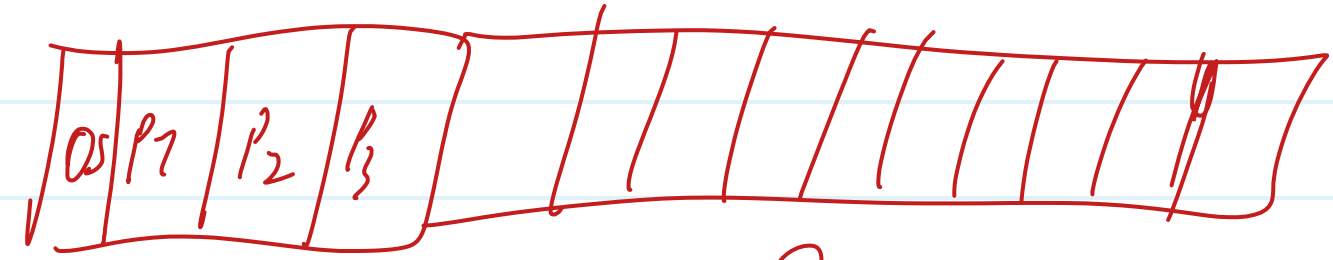
$$n \log p \leq \log 0{,}01 \quad / : (\log p)$$

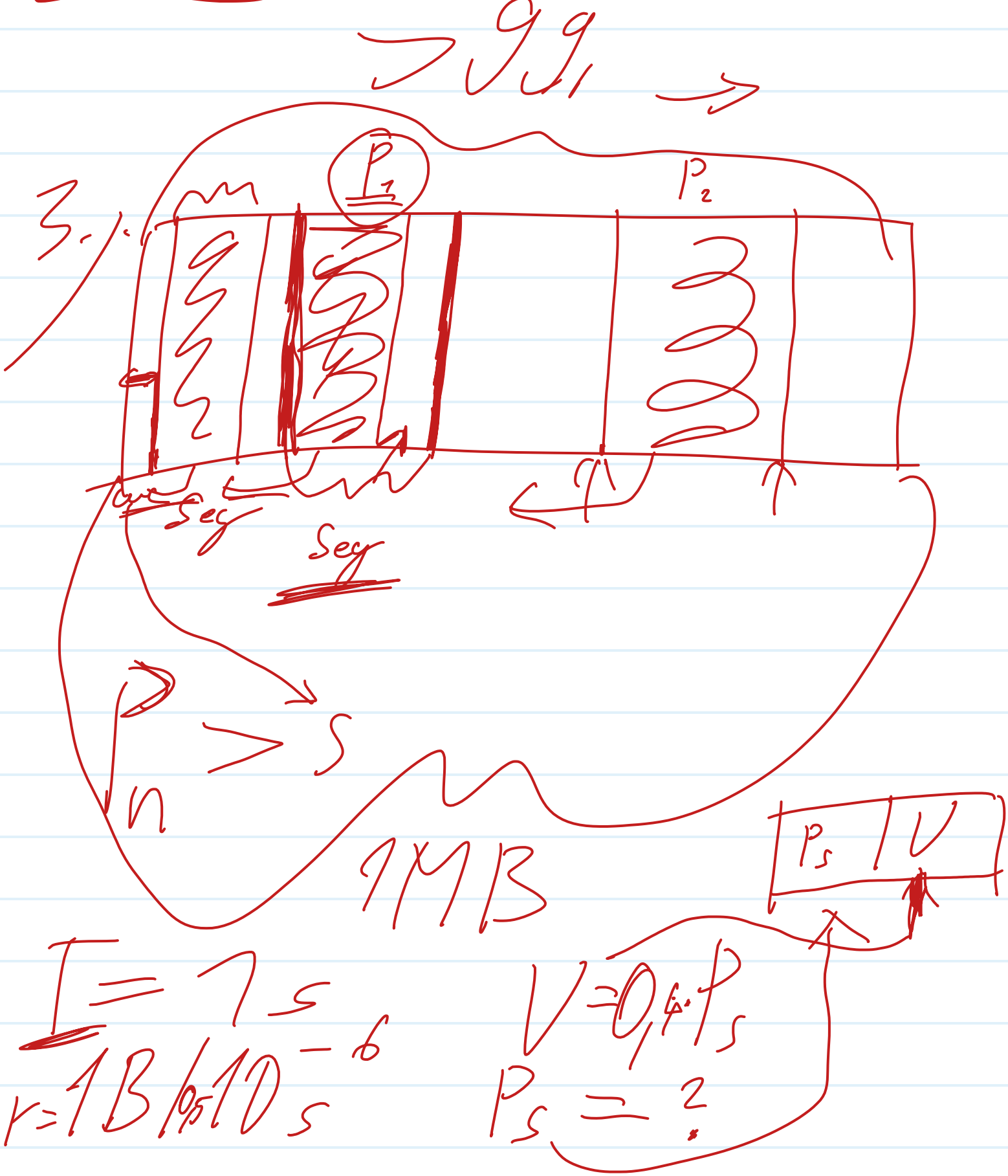
$$n \geq \frac{\log 0{,}01}{\log 0{,}6} \qquad 10^{-} = 3$$

$$n \geq 9{,}015$$

[illegible] 7

[illegible] 3,5173 [illegible] 99% [illegible]





$T = 7\,s$

$V = 0{,}4 \cdot P_s$

$r = 1\,B / 5 \cdot 10^{-6}\,s$

$P_s = 2$

$$M_E = 0,4 \cdot P_S + P_S$$

$$1MB = 1,4 P_S$$

$$P_S = 0,7144 MB$$

$$P_S = 0,7144 \cdot 2^{20} B$$

$$P_S = 748693,264 B$$

$$K = P_S \cdot r = \{\} \cdot 0,5 \cdot 10^{-6} s$$

počet

$$= 0,3744 9 s$$

10 B / 1 B

$0,5 \cdot 10^{-6} s$

$10 \cdot 0,5\ 10^{-6}$

$$v_k = \frac{k}{T} = \frac{0,37449}{T_s} =$$

0,37449 d) 37,449%

b) $v_k \leq 10\%$

$$\frac{k}{T} \leq v_k$$

$$\frac{k}{v_k} \leq T \qquad T \geq 3,7449_s$$

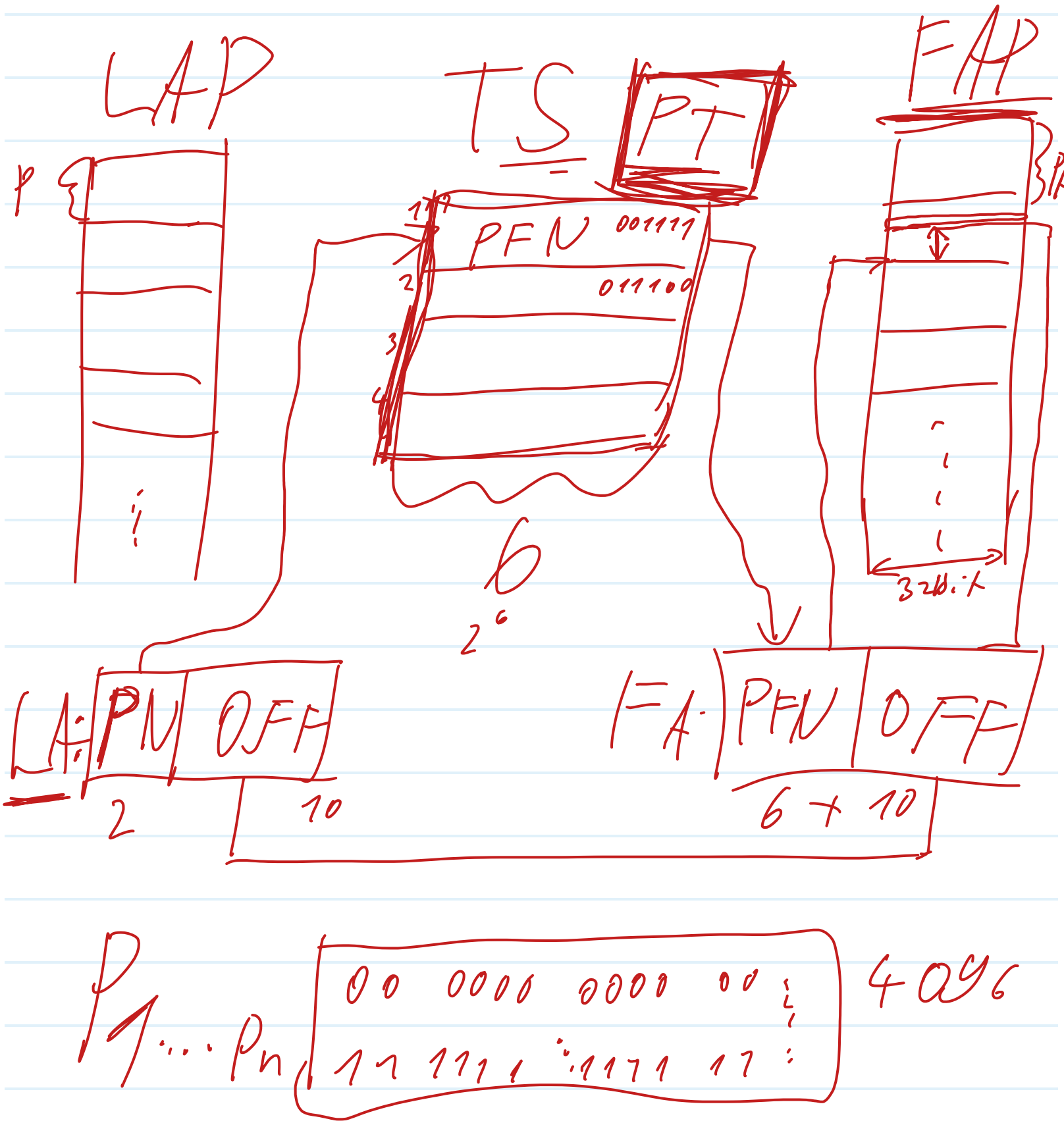
$$\frac{0,37449_s}{0,1} \leq T$$

4) $i = 1\mu s$

ni

$\underbrace{iiiiiiiiii}_{k} + n$

$$\frac{k+n}{k} = \left(1 + \frac{n\downarrow}{k\uparrow}\right)\downarrow$$



P1 ... Pn | 00 0000 0000 00 ; ... ; 11 1111 1111 11 ; | 4 ayg