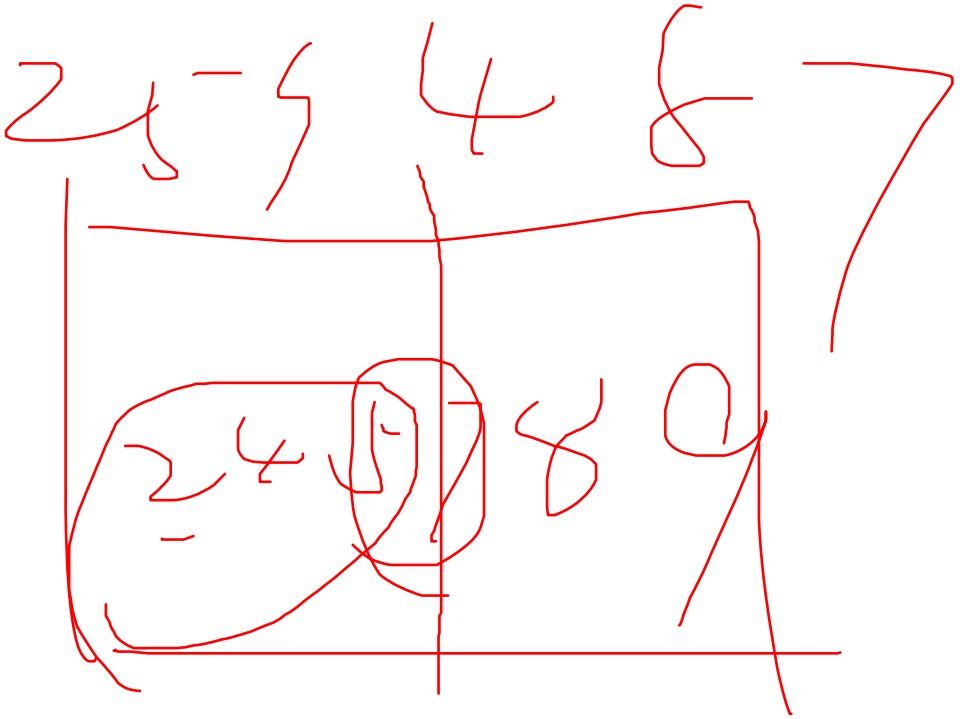

$P(Y=C_k \mid X=x)$ → 贝叶斯

$= \dfrac{P(Y=C_k \cap X=x)}{\sum_k P(X=x)}$

$= \dfrac{P(X=x \mid Y=C_k)\,P(Y=C_k)}{P(X=x)}$

$$P_e = \frac{\text{错误接收的码元数}}{\text{传输的总码元数}} = \frac{N_e}{N}$$

接收的比特数在传输总比特数中所占的比例，

$$P_b = \frac{\text{错误接收的比特数}}{\text{传输的总比特数}} = \frac{I_e}{I}$$

$P_b = \frac{\text{错误码元}}{\log_2 M} = \frac{\text{小}}{\text{大}}$

$\log_2 M$

$\log(P(y|x)) - w_0 - \sum w_i f_i(x,y)$

$$= \exp\left(\sum_i w_i \cdot f_i(x, y) + w_0 - 1\right)$$

$$= \exp\left(\sum_i w_i f_i(x, y)\right)$$

$$1 = \frac{\sum e\left(\sum w_i f_i(x, y)\right)}{e(1 - w_0)}$$

$$e(1 - w_0) = \sum e\left(\sum w_i f_i(x, y)\right)$$

$$P(y|x) = \frac{e\left(\sum w_i f_i(x, y)\right)}{\sum e\left(\sum w_i f_i(x, y)\right)}$$

$$L(P,w)=\sum_{i=1}^{5}P(y_i)\log P(y_i)+w_1\left(P(y_1)+P(y_2)-\frac{3}{10}\right)+w_0\left(\sum_{i=1}^{5}P(y_i)-1\right)$$

$2e^{-w_1-w_0-1}+3e^{-w_0-1}$

$x_2(b)-1\geq 0$

$y_1 b-1\geq b$

$y_2 b-1\geq 0$

$b\geq \frac{1}{y_1}$ $b\leq \frac{-1}{y_2}$

$$\min_{w,b} \quad \frac{1}{2}\|w\|^2$$

$$\text{s.t.} \quad y_i(w \cdot x_i + b) - 1 \geqslant 0, \quad i = 1, 2, \cdots, N$$

$$\text{minimize} \quad \max_{i=1,\cdots,k} |a_i^T x - b_i|. \tag{1.6}$$

$$t = \max_{i=1\sim k} |a_i^T x - b_i|$$

$$t \geq \min$$

$$t \geq |a_i^T x - b_i|$$

$$a_i^T x - b_i \leq t$$

$$b_i - a_i^T x \leq t$$

$a_i^T x - b_i \leq 0$

$t^T y = 0$

$x^T y = 0$

$\geq$

$(a_i^T x - b_i)$

$= 2(a_i^T x - b_i) \cdot a_i$

$= (a_i^T) \geq 0$

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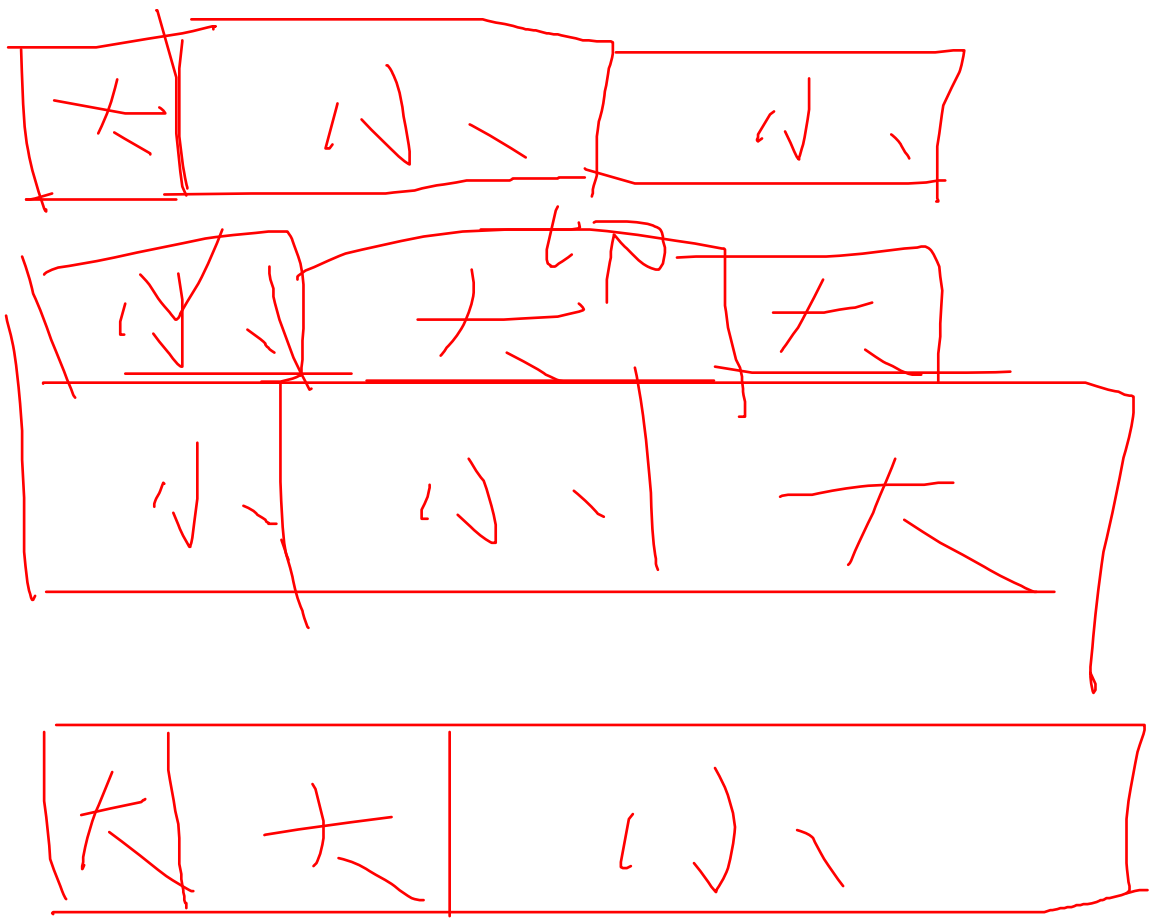
'key': [__ ___ ___ ___ ...]
key

{1: 2, 3: 4}

$$h_k(n) = h_0(n-k)$$



$$e^{ix} = \cos x + i \sin x$$

$$\overline{e^{ix}} = \cos x - i\sin x$$

$$e^{-ix} = e^{\cos x} + i\sin(-x)$$

$$\overline{e^{ix}} = e^{-ix}$$

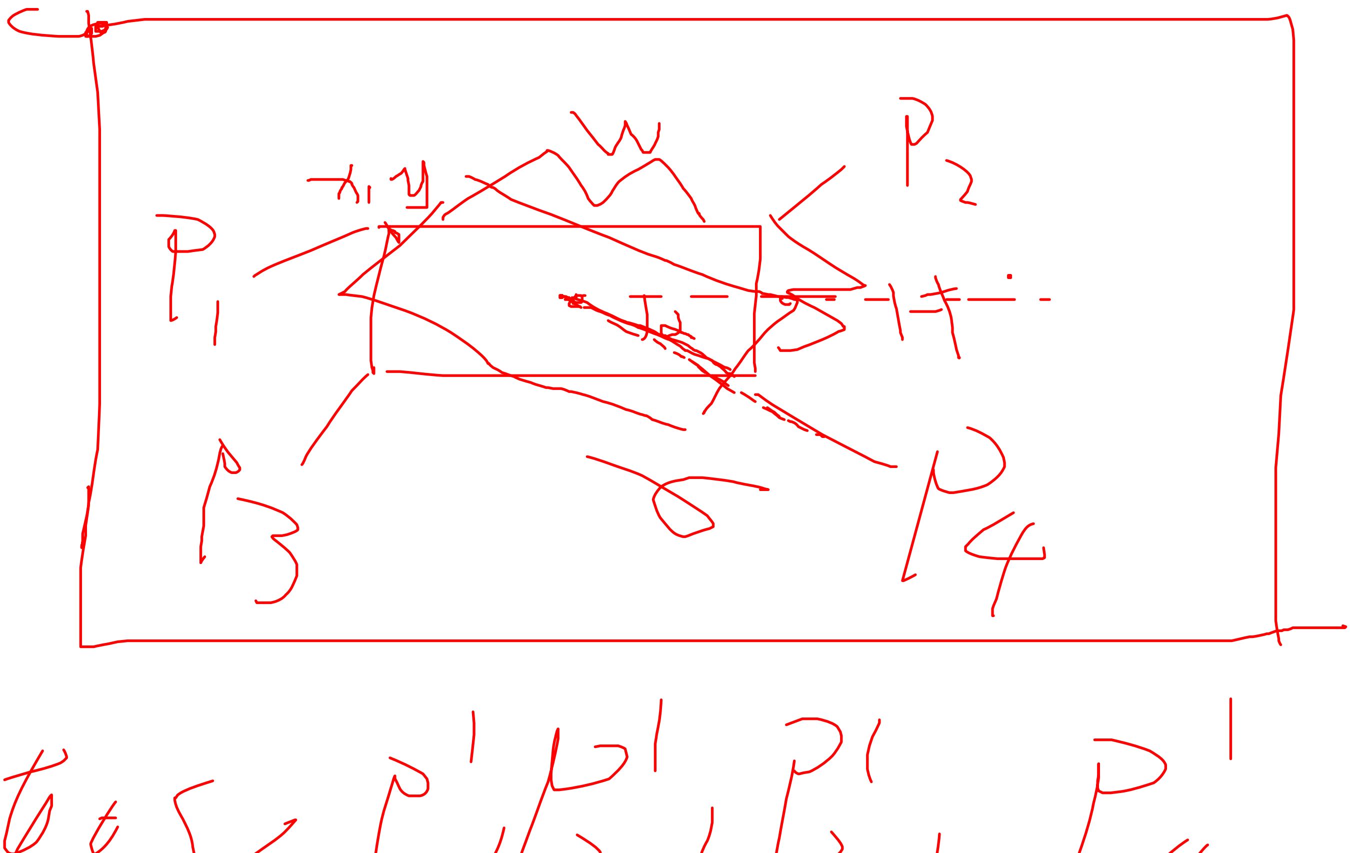


Fig 56 P_1', P_2', P_3', P_4'

中心：$\left(x+\frac{w}{2},\ y+\frac{h}{2}\right)$

$$\frac{d^2}{dt^2}i(t)+7\frac{d}{dt}i(t)+10i(t)$$
$$=2\delta'(t)+12\delta(t)+16u(t) \quad (2-24)$$

$i(0^+)-i(0^-)=a\left(\Delta u(0^+)-\Delta u(0^-)\right)$

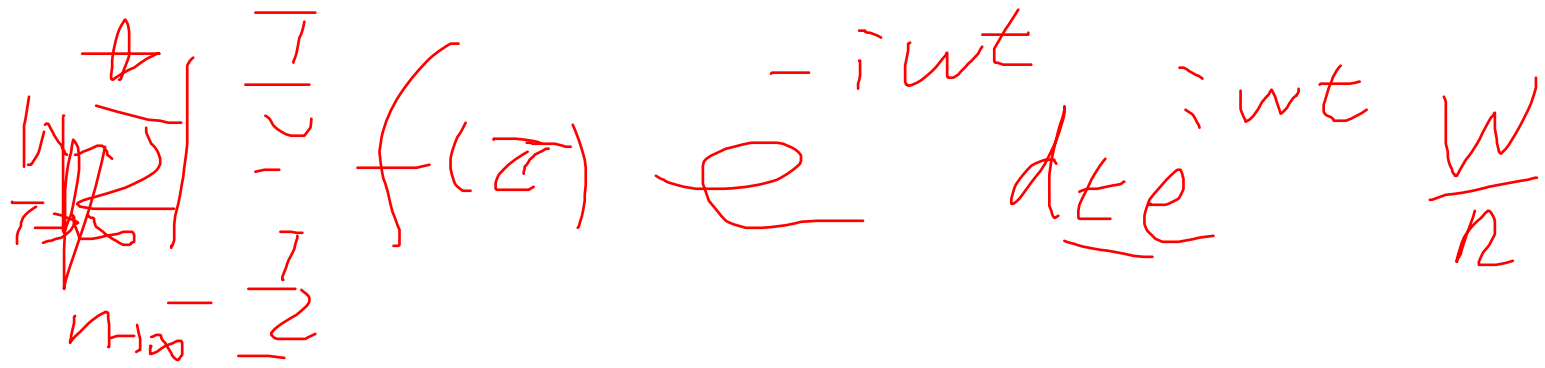
$i(t)=a\Delta u(t)=0$

$$i(0^+) = a\Delta u(0^+)$$

$$\begin{cases} \dfrac{\mathrm{d}}{\mathrm{d}t} i(t) = a\delta(t) + b\Delta u(t) \end{cases}$$

$$\frac{d}{dt} i(0^+) - \frac{d}{dt} i(0^-)$$

$$= a\left(\delta(0^+) - \delta(0^-)\right) + b$$



$$= \frac{1}{2\pi} \lim_{T \to +\infty} \sum_{n=-\infty}^{+\infty} \int_{-\frac{T}{2}}^{\frac{T}{2}} f(\tau) e^{-i\frac{2n\pi}{T}\tau} d\tau \; e^{i\frac{2n\pi}{T}t} \frac{2\pi}{T}$$

$$= \frac{1}{2\pi} \int_{-\infty}^{+\infty} \int_{-\infty}^{+\infty} f(\tau) e^{-i\omega\tau} d\tau \; e^{i\omega t} d\omega .$$

$\omega = \frac{2n\pi}{T}$

$d\omega =$

$\lim_{T \to +\infty} \int_{-\frac{T}{2}}^{\frac{T}{2}} f(\tau) e^{-in\omega} d\tau \; e^{in\omega t}$ $\omega =$

$\omega \to 0$