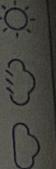


10



Thứ
ngày

Mastran

No. 167

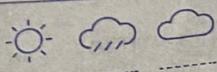
7	5	6	4
5	4	7	3
2	1	8	5
6	7	4	1
7	4	8	5
4	5	6	5
7	6	3	6
4	1	3	7
3	3	6	7
4	7	7	5

Ma fān husto y'gram!

A hand-drawn graph on lined paper showing a piecewise function. The x-axis is labeled from 0 to 7. The y-axis is labeled from 0 to 7. The function consists of several segments:

- A vertical segment at $x=0$ from $y=0$ to $y=1$.
- A horizontal segment at $y=1$ from $x=0$ to $x=3$.
- A vertical segment at $x=3$ from $y=1$ to $y=3$.
- A horizontal segment at $y=3$ from $x=3$ to $x=6$.
- A vertical segment at $x=6$ from $y=3$ to $y=6$.
- A horizontal segment at $y=6$ from $x=6$ to $x=7$.

Thứ ngày



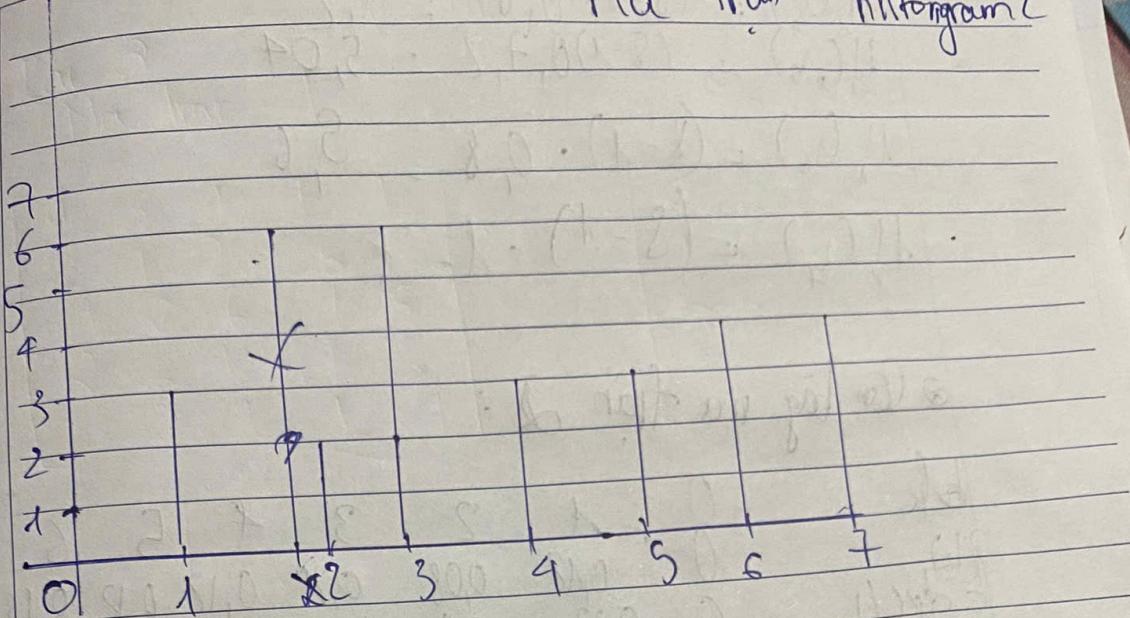
$$S_5 = \frac{19 - 1}{2^5 - 1} (4 - 1) = 2,25 \approx 2$$

$$S_6 = \frac{21 - 1}{2^6 - 1} (4 - 1) = 2,5 \approx 3$$

$$S_7 = \frac{25 - 1}{2^7 - 1} (4 - 1) = 3$$

$$\begin{bmatrix} 5 & 4 & 6 & 7 & 5 \\ 7 & 3 & 5 & 4 & 5 \\ 5 & 7 & 2 & 4 & 2 \\ 5 & 4 & 1 & 4 & 4 \\ 7 & 5 & 2 & 6 & 4 \end{bmatrix} \longrightarrow \begin{bmatrix} 2 & 1 & 3 & 3 & 2 \\ 3 & 1 & 2 & 1 & 2 \\ 2 & 3 & 0 & 1 & 0 \\ 2 & 1 & 0 & 1 & 1 \\ 3 & 2 & 0 & 3 & 1 \end{bmatrix}$$

Ma trận histogram 2



b) Thực hiện histogram matching

Ma trận 1:

	0	1	2	3	4	5	6	7
$h_p(x_k)$	0	0.2	0.16	0.08	0.16	0.12	0.08	0.2
$cdf(x_k)$	0	0.2	0.36	0.49	0.6	0.72	0.8	1
$H_1(x_k)$	0	1.4	2.92	3.08	4.2	5.09	5.6	7
$R(H_1, k)$	0	1	3	3	4	5	6	7

Ta có công thức:

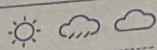
$$H_1(x_k) = (L-1) \cdot cdf(x_k)$$

$$H_1(x_0) = (8-1) \cdot 0 = 0$$

$$H_1(x_1) = (8-1) \cdot 0.2 = 1.4$$

$$H_1(x_2) = (8-1) \cdot 0.36 = 4.2, 52$$

$$H_1(x_3) = (8-1) \cdot 0.49 = 3.08$$



$$H_1(z_1) = (8-1) \cdot 0,6 = 1,2$$

$$H_1(z_2) = (8-1) \cdot 0,712 = 5,04$$

$$H_1(z_3) = (8-1) \cdot 0,8 = 5,6$$

$$H_1(z_4) = (8-1) \cdot 1 = 7$$

② Cân bằng mảng phần 2:

	0	1	2	3	4	5	6	7
bk	0	0,12	0,08	0,24	0,12	0,12	0,16	0,16
R _{bk}	0	0,12	0,2	0,44	0,56	0,68	0,84	1
CDF(bk)	0	0,12	0,2	0,44	0,56	0,68	0,84	1
H _{bk} (bk)	0	0,84	1,4	3,08	3,92	4,76	5,88	7
R _{bk} (H _{bk})	0	1	1	3	1	5	6	7

Có ct: $H_1(z_n) = (L-1) \cdot \text{CDF}(s, l)$

$$H_1(z_0) = (8-1) \cdot 0 = 0$$

$$H_1(z_1) = (8-1) \cdot 0,12 = 0,84$$

$$H_1(z_2) = (8-1) \cdot 0,2 = 1,4$$

$$H_1(z_3) = (8-1) \cdot 0,44 = 3,08$$

$$H_1(z_4) = (8-1) \cdot 0,56 = 3,92$$

$$H_1(z_5) = (8-1) \cdot 0,65 = 4,76$$

$$H_1(z_6) = (8-1) \cdot 0,84 = 5,85$$



Thứ ngày . . .

$$H_1(z_1) = (8 - 1) \cdot 1 = 7$$

Bảng ánh xạ mức xám:

r_i	$H_1(r_i)$	z_i	$H(z_i)$	r_{nau}
0	0	0	0	0
1	1	1	1	1
2	3	2	3	3
3	3	3	4	4
4	1	1	5	5
5	5	5	6	6
6	6	6	7	7
7	7	7	7	7