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IVP.

1. Given histogram A and B, modify histogram of A as given by histogram B

Img A	Gray level (n)	0	1	2	3	4	5	6	7
	No. of pixels (p)	8	10	10	2	12	16	4	2

Img B	Gray level (n)	0	1	2	3	4	5	6	7
	No. of pixels (p)	0	0	0	0	20	20	16	8

Ans. Step1 obtain cdf of both histogram.

$T(r)$: cdf of A cdf => cumulative distribution

$G(z)$: cdf of B

Now,

Gray level	0	1	2	3	4	5	6	7
$T(r)$	8	18	28	30	42	58	62	64
$G(z)$	0	0	0	0	20	40	56	64

Step2 for matching CDF check $G(z) \neq T(r)$

Gray level A → r →	0	1	2	3	4	5	6	7
Gray level B → z →	4	4	5	5	6	7	7	7

Step 3. :→

New	z	r	No. of pixels
	0	–	0
	1	–	0
	2	–	0
	3	–	0
	4	0,1	8 + 10 = 18
	5	2,3	10 + 2 = 12
	6	4	12
	7	5,6,7	16 + 4 + 2 = 22