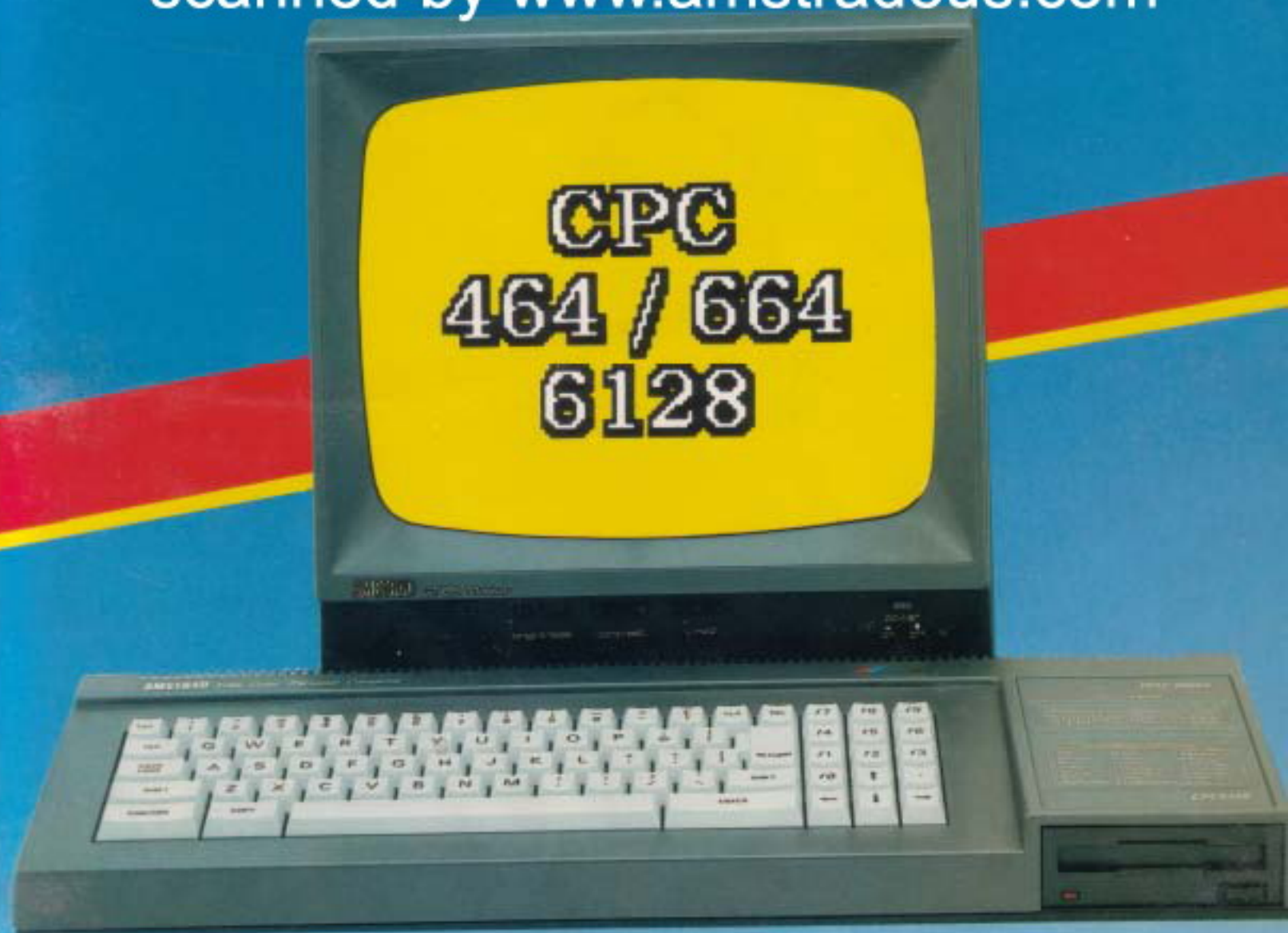


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Partie 11

Annexes

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Annexe 1

Codes de contrôle et caractères ASCII

Décimal	Hexadécimal	Caractère ASCII
0	00	NUL (CTRL @)
1	01	SOH (CTRL A)
2	02	STX (CTRL B)
3	03	ETX (CTRL C)
4	04	EOT (CTRL D)
5	05	ENQ (CTRL E)
6	06	ACQ (CTRL F)
7	07	BEL (CTRL G)
8	08	BS (CTRL H)
9	09	HT (CTRL I)
10	0A	LF (CTRL J)
11	0B	VT (CTRL K)
12	0C	FF (CTRL L)
13	0D	CR (CTRL M)
14	0E	SO (CTRL N)
15	0F	SI (CTRL O)
16	10	DLE (CTRL P)
17	11	DC1 (CTRL Q)
18	12	DC2 (CTRL R)
19	13	DC3 (CTRL S)
20	14	DC4 (CTRL T)
21	15	NAK (CTRL U)
22	16	SYN (CTRL V)
23	17	ETB (CTRL W)
24	18	CAN (CTRL X)
25	19	EM (CTRL Y)
26	1A	SUB (CTRL Z)
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US
32	20	SP
33	21	!
34	22	"
35	23	#
36	24	\$
37	25	%
38	26	&
39	27	'
40	28	(
41	29	)
42	2A	*
43	2B	+
44	2C	,
45	2D	-
46	2E	.
47	2F	/
48	30	0
49	31	1
50	32	2
51	33	3
52	34	4

Décimal	Hexadécimal	Caractère ASCII
53	35	5
54	36	6
55	37	7
56	38	8
57	39	9
58	3A	:
59	3B	;
60	3C	<
61	3D	=
62	3E	>
63	3F	?
64	40	@
65	41	A
66	42	B
67	43	C
68	44	D
69	45	E
70	46	F
71	47	G
72	48	H
73	49	I
74	4A	J
75	4B	K
76	4C	L
77	4D	M
78	4E	N
79	4F	O
80	50	P
81	51	Q
82	52	R
83	53	S
84	54	T
85	55	U
86	56	V
87	57	W
88	58	X
89	59	Y
90	5A	Z
91	5B	[
92	5C	\
93	5D	]
94	5E	^
95	5F	_
96	60	`
97	61	a
98	62	b
99	63	c
100	64	d
101	65	e
102	66	f
103	67	g
104	68	h
105	69	i
106	6A	j

Décimal	Hexadécimal	Caractère ASCII
107	6B	k
108	6C	l
109	6D	m
110	6E	n
111	6F	o
112	70	p
113	71	q
114	72	r
115	73	s
116	74	t
117	75	u
118	76	v
119	77	w
120	78	x
121	79	y
122	7A	z
123	7B	[
124	7C	\
125	7D	]
126	7E	_

Caractère ASCII Hexadécimal Décimal

0	30	48
1	31	49
2	32	50
3	33	51
4	34	52
5	35	53
6	36	54
7	37	55
8	38	56
9	39	57
A	41	65
B	42	66
C	43	67
D	44	68
E	45	69
F	46	70
a	61	97
b	62	98
c	63	99
d	64	100
e	65	101
f	66	102

Annexe 2

Codes opératoires de l'assembleur Z80 et leur codage en hexadécimal

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
ADC A, (HL)	8E	^ ^ V ^ 0 ^	A ← A + (HL) + c	2
ADC A, (IX+d)	DD8Edd	^ ^ V ^ 0 ^	A ← A + (IX+d) + c	5
ADC A, (IY+d)	FD8Edd	^ ^ V ^ 0 ^	A ← A + (IY+d) + c	5
ADC A, A	8F	^ ^ V ^ 0 ^	A ← A + A + c	1
ADC A, B	88	^ ^ V ^ 0 ^	A ← A + B + c	1
ADC A, C	89	^ ^ V ^ 0 ^	A ← A + C + c	1
ADC A, D	8A	^ ^ V ^ 0 ^	A ← A + D + c	1
ADC A, E	8B	^ ^ V ^ 0 ^	A ← A + E + c	1
ADC A, H	8C	^ ^ V ^ 0 ^	A ← A + H + c	1
ADC A, L	8D	^ ^ V ^ 0 ^	A ← A + L + c	1
ADC A, N	CEnn	^ ^ V ^ 0 ^	A ← A + nn + c	2
ADC HL, BC	ED4A	^ ^ V ^ 0 X	HL ← HL + BC + c	4
ADC HL, DE	ED5A	^ ^ V ^ 0 X	HL ← HL + DE + c	4
ADC HL, HL	ED6A	^ ^ V ^ 0 X	HL ← HL + HL + c	4
ADC HL, SP	ED7A	^ ^ V ^ 0 X	HL ← HL + SP + c	4
ADD A, (HL)	86	^ ^ V ^ 0 ^	A ← A + (HL)	2
ADD A, (IX+dd)	DD86dd	^ ^ V ^ 0 ^	A ← A + (IX+dd)	5
ADD A, (IY+dd)	FD86dd	^ ^ V ^ 0 ^	A ← A + (IY+dd)	5
ADD A, A	87	^ ^ V ^ 0 ^	A ← A + A	1
ADD A, B	80	^ ^ V ^ 0 ^	A ← A + B	1
ADD A, C	81	^ ^ V ^ 0 ^	A ← A + C	1
ADD A, D	82	^ ^ V ^ 0 ^	A ← A + D	1
ADD A, E	83	^ ^ V ^ 0 ^	A ← A + E	1
ADD A, H	84	^ ^ V ^ 0 ^	A ← A + H	1
ADD A, L	85	^ ^ V ^ 0 ^	A ← A + L	1
ADD A, N	C6nn	^ ^ V ^ 0 ^	A ← A + nn	2
ADD HL, BC	09	^ . . . 0 X	HL ← HL + BC	3
ADD HL, DE	19	^ . . . 0 X	HL ← HL + DE	3
ADD HL, HL	29	^ . . . 0 X	HL ← HL + HL	3

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
ADD HL, SP	39	^ . . . 0 X	HL ← HL + SP	3
ADD IX, BC	DD09	^ . . . 0 X	IX ← IX + BC	4
ADD IX, DE	DD19	^ . . . 0 X	IX ← IX + DE	4
ADD IX, IX	DD29	^ . . . 0 X	IX ← IX + IX	4
ADD IX, SP	DD39	^ . . . 0 X	IX ← IX + SP	4
ADD IY, BC	FD09	^ . . . 0 X	IY ← IY + BC	4
ADD IY, DE	FD19	^ . . . 0 X	IY ← IY + DE	4
ADD IY, IY	FD29	^ . . . 0 X	IY ← IY + IY	4
ADD IY, SP	FD39	^ . . . 0 X	IY ← IY + SP	4
AND (HL)	A6	0 ^ P ^ 0 1	A ← A AND (HL)	2
AND (IX+dd)	DDA6dd	0 ^ P ^ 0 1	A ← A AND (IX+dd)	5
AND (IY+dd)	FDA6dd	0 ^ P ^ 0 1	A ← A AND (IY+dd)	5
AND A	A7	0 ^ P ^ 0 1	A ← A AND A	1
AND B	A0	0 ^ P ^ 0 1	A ← A AND B	1
AND C	A1	0 ^ P ^ 0 1	A ← A AND C	1
AND D	A2	0 ^ P ^ 0 1	A ← A AND D	1
AND E	A3	0 ^ P ^ 0 1	A ← A AND E	1
AND H	A4	0 ^ P ^ 0 1	A ← A AND H	1
AND L	A5	0 ^ P ^ 0 1	A ← A AND L	1
AND N	E6nn	0 ^ P ^ 0 1	A ← A AND nn	2
BIT 0, (HL)	CB46	. ^ X X 0 1	z ← $\overline{(\text{HL})}$	3
BIT 0, (IX+dd)	DDCBdd46	. ^ X X 0 1	z ← $\overline{(\text{IX}+\text{dd})}$	5
BIT 0, (IY+dd)	FDCBdd46	. ^ X X 0 1	z ← $\overline{(\text{IY}+\text{dd})}$	5
BIT 0, A	CB47	. ^ X X 0 1	z ← $\overline{A}$	2
BIT 0, B	CB40	. ^ X X 0 1	z ← $\overline{B}$	2
BIT 0, C	CB41	. ^ X X 0 1	z ← $\overline{C}$	2
BIT 0, D	CB42	. ^ X X 0 1	z ← $\overline{D}$	2
BIT 0, E	CB43	. ^ X X 0 1	z ← $\overline{E}$	2
BIT 0, H	CB44	. ^ X X 0 1	z ← $\overline{H}$	2
BIT 0, L	CB45	. ^ X X 0 1	z ← $\overline{L}$	2
BIT 1, (HL)	CB4E	. ^ X X 0 1	z ← $\overline{(\text{HL})}$	3
BIT 1, (IX+dd)	DDCBdd4E	. ^ X X 0 1	z ← $\overline{(\text{IX}+\text{dd})}$	5
BIT 1, (IY+dd)	FDCBdd4E	. ^ X X 0 1	z ← $\overline{(\text{IY}+\text{dd})}$	5

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		✓		
BIT 1,A	CB4F	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 1,B	CB48	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 1,C	CB49	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 1,D	CB4A	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 1,E	CB4B	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 1,H	CB4C	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 1,L	CB4D	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 2,(HL)	CB56	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 2,(IX+dd)	DDCBdd56	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 2,(IY+dd)	FDCBdd56	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 2,A	CB57	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 2,B	CB50	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 2,C	CB51	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 2,D	CB52	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 2,E	CB53	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 2,H	CB54	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 2,L	CB55	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 3,(HL)	CB5E	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 3,(IX+dd)	DDCBdd5E	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 3,(IY+dd)	FDCBdd5E	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 3,A	CB5F	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 3,B	CB58	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 3,C	CB59	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 3,D	CB5A	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 3,E	CB5B	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 3,H	CB5C	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 3,L	CB5D	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 4,(HL)	CB66	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 4,(IX+dd)	DDCBdd66	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 4,(IY+dd)	FDCBdd66	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 4,A	CB67	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 4,B	CB60	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 4,C	CB61	. ^ X X 0 1	$z \leftarrow \overline{C}$	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		✓		
BIT 4,D	CB62	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 4,E	CB63	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 4,H	CB64	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 4,L	CB65	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 5,(HL)	CB6E	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 5,(IX+dd)	DDCBdd6E	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 5,(IY+dd)	FDCBdd6E	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 5,A	CB6F	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 5,B	CB68	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 5,C	CB69	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 5,D	CB6A	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 5,E	CB6B	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 5,H	CB6C	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 5,L	CB6D	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 6,(HL)	CB76	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 6,(IX+dd)	DDCBdd76	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 6,(IY+dd)	FDCBdd76	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 6,A	CB77	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 6,B	CB70	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 6,C	CB71	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 6,D	CB72	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 6,E	CB73	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 6,H	CB74	. ^ X X 0 1	$z \leftarrow \overline{H}$	2
BIT 6,L	CB75	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
BIT 7,(HL)	CB7E	. ^ X X 0 1	$z \leftarrow \overline{(HL)}$	3
BIT 7,(IX+dd)	DDCBdd7E	. ^ X X 0 1	$z \leftarrow \overline{(IX+dd)}$	5
BIT 7,(IY+dd)	FDCBdd7E	. ^ X X 0 1	$z \leftarrow \overline{(IY+dd)}$	5
BIT 7,A	CB7F	. ^ X X 0 1	$z \leftarrow \overline{A}$	2
BIT 7,B	CB78	. ^ X X 0 1	$z \leftarrow \overline{B}$	2
BIT 7,C	CB79	. ^ X X 0 1	$z \leftarrow \overline{C}$	2
BIT 7,D	CB7A	. ^ X X 0 1	$z \leftarrow \overline{D}$	2
BIT 7,E	CB7B	. ^ X X 0 1	$z \leftarrow \overline{E}$	2
BIT 7,H	CB7C	. ^ X X 0 1	$z \leftarrow \overline{H}$	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
BIT 7,L	CB7D	. ^ X X 0 1	$z \leftarrow \overline{L}$	2
CALL C,ADR	DCaaaa		si C, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL M,ADR	FCaaaa		si M, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL NC,ADR	D4aaaa		si NC, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL ADR	CDaaaa		pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	5
CALL NZ,ADR	C4aaaa		si NZ, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL P,ADR	F4aaaa		si P, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL PE,ADR	ECaaaa		si PE, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL PO,ADR	E4aaaa		si PO, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CALL Z,ADR	CCaaaa		si Z, pile $\leftarrow$ -PC,PC $\leftarrow$ -ADR	3
CCF	3F	^ . . . 0 X	$c \leftarrow \overline{c}$	1
CP (HL)	BE	^ ^ V ^ 1 ^	A-(HL)	2
CP (IX+dd)	DDBEdd	^ ^ V ^ 1 ^	A-(IX+dd)	5
CP (IY+dd)	FDBEdd	^ ^ V ^ 1 ^	A-(IY+dd)	5
CP A	BF	^ ^ V ^ 1 ^	A-A	1
CP B	BB	^ ^ V ^ 1 ^	A-B	1
CP C	B9	^ ^ V ^ 1 ^	A-C	1
CP D	BA	^ ^ V ^ 1 ^	A-D	1
CP E	BB	^ ^ V ^ 1 ^	A-E	1
CP H	BC	^ ^ V ^ 1 ^	A-H	1
CP L	BD	^ ^ V ^ 1 ^	A-L	1
CP N	FENN	^ ^ V ^ 1 ^	A-nn	2
CPD	EDA9	. ^ ^ ^ 1 ^	A $\leftarrow$ -(HL),HL $\leftarrow$ -HL-1,BC $\leftarrow$ -BC-1	4
CPDR	EDB9	. ^ ^ ^ 1 ^	A $\leftarrow$ -(HL),HL $\leftarrow$ -HL-1,BC $\leftarrow$ -BC-1 Repet. jusqu'à A=(HL) ou BC=0.	5/4
CPI	EDA1	. ^ ^ ^ 1 ^	A $\leftarrow$ -(HL),HL $\leftarrow$ -HL+1,BC $\leftarrow$ -BC-1	4
CPIR	EDB1	. ^ ^ ^ 1 ^	A $\leftarrow$ -(HL),HL $\leftarrow$ -HL+1,BC $\leftarrow$ -BC-1 Répét. jusqu'à A=(HL) ou BC=0.	5/4
CPL	2F	 1 1	A $\leftarrow$ $\overline{A}$	1
DAA	27	^ ^ P ^ . ^	Ajustement decimal	1
DEC (HL)	35	. ^ V ^ 1 ^	(HL)=(HL)-1	3
DEC (IX+dd)	DD35dd	. ^ V ^ 1 ^	(IX+dd)=(IX+dd)-1	6
DEC (IY+dd)	FD35dd	. ^ V ^ 1 ^	(IY+dd)=(IY+dd)-1	6
DEC A	3D	. ^ V ^ 1 ^	A $\leftarrow$ A-1	1

Mnémonique	Op-code	c z p s n h v	Opération symbolique	Cycles machine
DEC B	05	. ^ V ^ 1 ^	B←B-1	1
DEC BC	0B		BC←BC-1	1
DEC C	0D	. ^ V ^ 1 ^	C←C-1	1
DEC D	15	. ^ V ^ 1 ^	D←D-1	1
DEC DE	1B		DE←DE-1	1
DEC E	1D	. ^ V ^ 1 ^	E←E-1	1
DEC H	25	. ^ V ^ 1 ^	H←H-1	1
DEC HL	2B		HL←HL-1	1
DEC IX	DD2B		IX←IX-1	2
DEC IY	FD2B		IY←IY-1	2
DEC L	2D	. ^ V ^ 1 ^	L←L-1	1
DEC SP	3B		SP←SP-1	1
DI	F3		IFF←0	1
DJNZ DEPL	10dd		B←B-1, si B≠0, PC←PC+dd	2/3
EI	FB		IFF←1	1
EX (SP), HL	E3		H←→(SP+1) et L←→(SP)	5
EX (SP), IX	DDE3		IXH←→(SP+1), IXL←→(SP)	6
EX (SP), IY	FDE3		IYH←→(SP+1), IYL←→(SP)	6
EX AF, AF'	0B		AF←→AF'	1
EX DE, HL	EB		DE←→HL	1
EXX	D9		BC←→BC', DE←→DE', HL←→HL'	1
HALT	76		Stoppe 1'UC	1
IM 0	ED46		Interrupt Mode 0	2
IM 1	ED56		Interrupt Mode 1	2
IM 2	ED5E		Interrupt Mode 2	2
IN A, (C)	ED7B	. ^ P ^ 0 ^	A←(C)	3
IN A, (N)	DBnn		A←(nn)	3
IN B, (C)	ED40	. ^ P ^ 0 ^	B←(C)	3
IN C, (C)	ED48	. ^ P ^ 0 ^	C←(C)	3
IN D, (C)	ED50	. ^ P ^ 0 ^	D←(C)	3
IN E, (C)	ED58	. ^ P ^ 0 ^	E←(C)	3
IN H, (C)	ED60	. ^ P ^ 0 ^	H←(C)	3
IN L, (C)	ED68	. ^ P ^ 0 ^	L←(C)	3

Mnémonique	Op-code	c z p s n h v	Opération symbolique	Cycles machine
INC (HL)	34	. ^ V ^ 0 ^	HL←HL+1	3
INC (IX+dd)	DD34dd	. ^ V ^ 0 ^	(IX+dd)←(IX+dd)+1	6
INC (IY+dd)	FD34dd	. ^ V ^ 0 ^	(IY+dd)←(IY+dd)+1	6
INC A	3C	. ^ V ^ 0 ^	A←A+1	1
INC B	04	. ^ V ^ 0 ^	B←B+1	1
INC BC	03		BC←BC+1	1
INC C	0C	. ^ V ^ 0 ^	C←C+1	1
INC D	14	. ^ V ^ 0 ^	D←D+1	1
INC DE	13		DE←DE+1	1
INC E	1C	. ^ V ^ 0 ^	E←E+1	1
INC H	24	. ^ V ^ 0 ^	H←H+1	1
INC HL	23		HL←HL+1	1
INC IX	DD23		IX←IX+1	2
INC IY	FD23		IY←IY+1	2
INC L	2C	. ^ V ^ 0 ^	L←L+1	1
INC SP	33		SP←SP+1	1
IND	EDAA	. ^ X X 1 X	(HL)←(C), B←B-1, HL←HL-1	4
INDR	EDBA	. 1 X X 1 X	(HL)←(C), B←B-1, HL←HL-1 Action répétée jusqu'à B=0	5/4
INI	EDA2	. ^ X X 1 X	(HL)←(C), B←B-1, HL←HL+1	4
INIR	EDB2	. 1 X X 1 X	(HL)←(C), B←B-1, HL←HL+1 Action répétée jusqu'à B=0	5/4
JP (HL)	E9		PC←HL	1
JP (IX)	DDE9		PC←IX	2
JP (IY)	FDE9		PC←IY	2
JP C,ADR	DAaaaa		Saut si c=1 à ADR	3
JP M,ADR	FAaaaa		Saut si minus à ADR	3
JP NC,ADR	D2aaaa		Saut si c=0	3
JP ADR	C3aaaa		PC←ADR	3
JP NZ,ADR	C2aaaa		Saut si z=0 à ADR	3
JP P,ADR	F2aaaa		Saut si positif à ADR	3
JP PE,ADR	EAaaaa		Saut si P=1 à ADR	3
JP PO,ADR	E2aaaa		Saut si P=1 à ADR	3

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
JP Z,ADR	CAaaaa		Saut si z=1 à ADR	3
JR C,DEPL	3Bdd		Saut si c=1 à ADR	2
JR DEPL	18dd		PC←-PC+dd	3
JR NC,DEPL	30dd		Saut si c=0	2
JR NZ,DEPL	20dd		Saut si z=0	2
JR Z,DEPL	28dd		Saut si z=1	2
LD (BC),A	02		(BC)←-A	2
LD (DE),A	12		(DE)←-A	2
LD (HL),A	77		(HL)←-A	2
LD (HL),B	70		(HL)←-B	2
LD (HL),C	71		(HL)←-C	2
LD (HL),D	72		(HL)←-D	2
LD (HL),E	73		(HL)←-E	2
LD (HL),H	74		(HL)←-H	2
LD (HL),L	75		(HL)←-L	2
LD (HL),N	36nn		(HL)←-nn	3
LD (IX+dd),A	DD77dd		(IX+dd)←-A	5
LD (IX+dd),B	DD70dd		(IX+dd)←-B	5
LD (IX+dd),C	DD71dd		(IX+dd)←-C	5
LD (IX+dd),D	DD72dd		(IX+dd)←-D	5
LD (IX+dd),E	DD73dd		(IX+dd)←-E	5
LD (IX+dd),H	DD74dd		(IX+dd)←-H	5
LD (IX+dd),L	DD75dd		(IX+dd)←-L	5
LD (IX+dd),N	DD36ddnn		(IX+dd)←-nn	5
LD (IY+dd),A	FD77dd		(IY+dd)←-A	5
LD (IY+dd),B	FD70dd		(IY+dd)←-B	5
LD (IY+dd),C	FD71dd		(IY+dd)←-C	5
LD (IY+dd),D	FD72dd		(IY+dd)←-D	5
LD (IY+dd),E	FD73dd		(IY+dd)←-E	5
LD (IY+dd),H	FD74dd		(IY+dd)←-H	5
LD (IY+dd),L	FD75dd		(IY+dd)←-L	5
LD (IY+dd),N	FD36ddnn		(IY+dd)←-nn	5
LD (NN),A	32nnnn		(nnnn)←-A	4

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
LD (NN), BC	ED43nnnn		(nnnn) <- BC	6
LD (NN), DE	ED53nnnn		(nnnn) <- DE	6
LD (NN), HL	22nnnn		(nnnn) <- HL	5
LD (NN), IX	DD22nnnn		(nnnn) <- IX	6
LD (NN), IY	FD22nnnn		(nnnn) <- IY	6
LD (NN), SP	ED73nnnn		(nnnn) <- SP	6
LD A, (BC)	0A		A <- (BC)	2
LD A, (DE)	1A		A <- (DE)	2
LD A, (HL)	7E		A <- (HL)	2
LD A, (IX+dd)	DD7Edd		A <- (IX+dd)	5
LD A, (IY+DD)	FD7Edd		A <- (IY+dd)	5
LD A, (NN)	3Annnn		A <- (nnnn)	4
LD A, A	7F		A <- A	1
LD A, B	7B		A <- B	1
LD A, C	79		A <- C	1
LD A, D	7A		A <- D	1
LD A, E	7B		A <- E	1
LD A, H	7C		A <- H	1
LD A, I	ED57	. ^ i . 0 0	A <- I	2
LD A, L	7D		A <- L	1
LD A, N	3Enn		A <- nn	2
LD A, R	ED5F	. ^ i . 0 0	A <- R	2
LD B, (HL)	46		B <- (HL)	2
LD B, (IX+dd)	DD46dd		B <- (IX+dd)	5
LD B, (IY+DD)	FD46dd		B <- (IY+dd)	5
LD B, A	47		B <- A	1
LD B, B	40		B <- B	1
LD B, C	41		B <- C	1
LD B, D	42		B <- D	1
LD B, E	43		B <- E	1
LD B, H	44		B <- H	1
LD B, L	45		B <- L	1
LD B, N	06nn		B <- nn	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
LD BC, (NN)	ED4Bnnnn		BC ← (nnnn)	6
LD BC, NN	D1nnnn		BC ← nnnn	3
LD C, (HL)	4E		C ← (HL)	2
LD C, (IX+dd)	DD4Edd		C ← (IX+dd)	5
LD C, (IY+DD)	FD4Edd		C ← (IY+dd)	5
LD C, A	4F		C ← A	1
LD C, B	48		C ← B	1
LD C, C	49		C ← C	1
LD C, D	4A		C ← D	1
LD C, E	4B		C ← E	1
LD C, H	4C		C ← H	1
LD C, L	4D		C ← L	1
LD C, N	0Enn		C ← nn	2
LD D, (HL)	56		D ← (HL)	2
LD D, (IX+dd)	DD56dd		D ← (IX+dd)	5
LD D, (IY+DD)	FD56dd		D ← (IY+dd)	5
LD D, A	57		D ← A	1
LD D, B	50		D ← B	1
LD D, C	51		D ← C	1
LD D, D	52		D ← D	1
LD D, E	53		D ← E	1
LD D, H	54		D ← H	1
LD D, L	55		D ← L	1
LD D, N	16nn		D ← nn	2
LD DE, (NN)	ED5Bnnnn		DE ← (nnnn)	6
LD DE, NN	11nnnn		DE ← nnnn	3
LD E, (HL)	5E		E ← (HL)	2
LD E, (IX+dd)	DD5Edd		E ← (IX+dd)	5
LD E, (IY+DD)	FD5Edd		E ← (IY+dd)	5
LD E, A	5F		E ← A	1
LD E, B	58		E ← B	1
LD E, C	59		E ← C	1
LD E, D	5A		E ← D	1

Mnémonique	Op-code	c z p s n h v	Opération symbolique	Cycles machine
LD E,E	5B		E←E	1
LD E,H	5C		E←H	1
LD E,L	5D		E←L	1
LD E,N	1Enn		E←nn	2
LD H,(HL)	66		H←(HL)	2
LD H,(IX+dd)	DD66dd		H←(IX+dd)	5
LD H,(IY+DD)	FD66dd		H←(IY+dd)	5
LD H,A	67		H←A	1
LD H,B	60		H←B	1
LD H,C	61		H←C	1
LD H,D	62		H←D	1
LD H,E	63		H←E	1
LD H,H	64		H←H	1
LD H,L	65		H←L	1
LD H,N	26nn		H←nn	2
LD HL,(NN)	2Annnn		HL←(nnnn)	5
LD HL,NN	21nnnn		HL←nnnn	3
LD I,A	ED47		I←A	2
LD IX,(NN)	DD2Annnn		IX←(nnnn)	6
LD IX,NN	DD21nnnn		IX←nnnn	4
LD IY,(NN)	FD2Annnn		IY←(nnnn)	6
LD IY,NN	FD21nnnn		IY←nnnn	4
LD L,(HL)	6E		L←(HL)	2
LD L,(IX+dd)	DD6Edd		L←(IX+dd)	5
LD L,(IY+DD)	FD6Edd		L←(IY+dd)	5
LD L,A	6F		L←A	1
LD L,B	68		L←B	1
LD L,C	69		L←C	1
LD L,D	6A		L←D	1
LD L,E	6B		L←E	1
LD L,H	6C		L←H	1
LD L,L	6D		L←L	1
LD L,N	2Enn		L←nn	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
LD R, A	ED4F		R←A	2
LD SP, (NN)	ED7Bnnnn		SP←(nnnn)	6
LD SP, HL	F9		SP←HL	1
LD SP, IX	DDF9		SP←IX	2
LD SP, IY	FDF9		SP←IY	2
LD SP, NN	31nnnn		SP←nnnn	3
LDD	EDA8	 0 0	(DE)←-(HL), DE←DE-1 HL←HL-1, BC←BC-1	4
LDDR	EDB8	. . 0 . 0 0	(DE)←-(HL), DE←DE-1 HL←HL-1, BC←BC-1 Répét. jusqu'à BC=0	5
LDI	EDA0	. . ^ . 0 0	(DE)←-(HL), DE←DE+1 HL←HL+1, BC←BC-1	4
LDIR	EDB0	. . 0 . 0 0	(DE)←-(HL), DE←DE+1 HL←HL+1, BC←BC-1 Répét. jusqu'à BC=0	5
NEG	ED44	^ ^ V ^ 1 ^	A←0-A	2
NOP	00		aucune action	1
OR (HL)	B6	0 ^ P ^ 0 0	A←A OU (HL)	2
OR (IX+dd)	DDB6dd	0 ^ P ^ 0 0	A←A OU (IX+dd)	5
OR (IY+dd)	FDB6dd	0 ^ P ^ 0 0	A←A OU (IY+dd)	5
OR A	B7	0 ^ P ^ 0 0	A←A OU A	1
OR B	B0	0 ^ P ^ 0 0	A←A OU B	1
OR C	B1	0 ^ P ^ 0 0	A←A OU C	1
OR D	B2	0 ^ P ^ 0 0	A←A OU D	1
OR E	B3	0 ^ P ^ 0 0	A←A OU E	1
OR H	B4	0 ^ P ^ 0 0	A←A OU H	1
OR L	B5	0 ^ P ^ 0 0	A←A OU L	1
OR N	F6nn	0 ^ P ^ 0 0	A←A OU nn	2
OTDR	EDBB	. 1 X X 1 X	(C)←-(HL), B←B-1, HL←HL-1 Répét. jusqu'à B=0.	5/4
OTIR	EDB3	. 1 X X 1 X	(C)←-(HL), B←B-1, HL←HL+1 Répét. jusqu'à B=0.	5/4

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		✓		
OUT (C),A	ED79		(C)←A	3
OUT (C),B	ED41		(C)←B	3
OUT (C),C	ED49		(C)←C	3
OUT (C),D	ED51		(C)←D	3
OUT (C),E	ED59		(C)←E	3
OUT (C),H	ED61		(C)←H	3
OUT (C),L	ED69	>. .	(C)←L	3
OUT (N),A	D3nn		(C)←nn	3
OUTD	EDAB	. ^ X X 1 X	(C)←(HL), B←B-1, HL←HL-1	4
OUTI	EDA3	. ^ X X 1 X	(C)←(HL), B←B-1, HL←HL+1	4
POP AF	F1	^ ^ ^ ^ ^ ^	A←(SP+1), F←(SP)	3
POP BC	C1		B←(SP+1), C←(SP)	3
POP DE	D1		D←(SP+1), E←(SP)	3
POP HL	E1		H←(SP+1), L←(SP)	3
POP IX	DDE1		IXH←(SP+1), IXL←(SP)	4
POP IY	FDE1		IYH←(SP+1), IYL←(SP)	4
PUSH AF	F5		(SP-2)←F, (SP-1)←A	3
PUSH BC	C5		(SP-2)←C, (SP-1)←B	3
PUSH DE	D5		(SP-2)←E, (SP-1)←D	3
PUSH HL	E5		(SP-2)←L, (SP-1)←H	3
PUSH IX	DDE5		(SP-2)←IXL, (SP-1)←IXH	4
PUSH IY	FDE5		(SP-2)←IYL, (SP-1)←IYH	4
RES 0,(HL)	CB86		(HL) ₀ ←0	4
RES 0,(IX+dd)	DDCBdd86		(IX+dd) ₀ ←0	6
RES 0,(IY+dd)	FDCBdd86		(IY+dd) ₀ ←0	6
RES 0,A	CB87		A ₀ ←0	2
RES 0,B	CB80		B ₀ ←0	2
RES 0,C	CB81		C ₀ ←0	2
RES 0,D	CB82		D ₀ ←0	2
RES 0,E	CB83		E ₀ ←0	2
RES 0,H	CB84		H ₀ ←0	2
RES 0,L	CB85		L ₀ ←0	2
RES 1,(HL)	CB8E		(HL) ₁ ←0	4

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
RES 1, (IX+dd)	DDCBdd8E		$(IX+dd)_1 \leftarrow -0$	6
RES 1, (IY+dd)	FDCBdd8E		$(IY+dd)_1 \leftarrow -0$	6
RES 1, A	CB8F		$A_1 \leftarrow -0$	2
RES 1, B	CB88		$B_1 \leftarrow -0$	2
RES 1, C	CB89		$C_1 \leftarrow -0$	2
RES 1, D	CB8A		$D_1 \leftarrow -0$	2
RES 1, E	CB8B		$E_1 \leftarrow -0$	2
RES 1, H	CB8C		$H_1 \leftarrow -0$	2
RES 1, L	CB8D		$L_1 \leftarrow -0$	2
RES 2, (HL)	CB96		$(HL)_2 \leftarrow -0$	4
RES 2, (IX+dd)	DDCBdd96		$(IX+dd)_2 \leftarrow -0$	6
RES 2, (IY+dd)	FDCBdd96		$(IY+dd)_2 \leftarrow -0$	6
RES 2, A	CB97		$A_2 \leftarrow -0$	2
RES 2, B	CB90		$B_2 \leftarrow -0$	2
RES 2, C	CB91		$C_2 \leftarrow -0$	2
RES 2, D	CB92		$D_2 \leftarrow -0$	2
RES 2, E	CB93		$E_2 \leftarrow -0$	2
RES 2, H	CB94		$H_2 \leftarrow -0$	2
RES 2, L	CB95		$L_2 \leftarrow -0$	2
RES 3, (HL)	CB9E		$(HL)_3 \leftarrow -0$	4
RES 3, (IX+dd)	DDCBdd9E		$(IX+dd)_3 \leftarrow -0$	6
RES 3, (IY+dd)	FDCBdd9E		$(IY+dd)_3 \leftarrow -0$	6
RES 3, A	CB9F		$A_3 \leftarrow -0$	2
RES 3, B	CB98		$B_3 \leftarrow -0$	2
RES 3, C	CB99		$C_3 \leftarrow -0$	2
RES 3, D	CB9A		$D_3 \leftarrow -0$	2
RES 3, E	CB9B		$E_3 \leftarrow -0$	2
RES 3, H	CB9C		$H_3 \leftarrow -0$	2
RES 3, L	CB9D		$L_3 \leftarrow -0$	2
RES 4, (HL)	CBA6		$(HL)_4 \leftarrow -0$	4
RES 4, (IX+dd)	DDCBddA6		$(IX+dd)_4 \leftarrow -0$	6
RES 4, (IY+dd)	FDCBddA6		$(IY+dd)_4 \leftarrow -0$	6
RES 4, A	CBA7		$A_4 \leftarrow -0$	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
RES 4,B	CBA0		$B_4 \leftarrow -0$	2
RES 4,C	CBA1		$C_4 \leftarrow -0$	2
RES 4,D	CBA2		$D_4 \leftarrow -0$	2
RES 4,E	CBA3		$E_4 \leftarrow -0$	2
RES 4,H	CBA4		$H_4 \leftarrow -0$	2
RES 4,L	CBA5		$L_4 \leftarrow -0$	2
RES 5,(HL)	CBAE		$(HL)_5 \leftarrow -0$	4
RES 5,(IX+dd)	DDCBddAE		$(IX+dd)_5 \leftarrow -0$	6
RES 5,(IY+dd)	FDCBddAE		$(IY+dd)_5 \leftarrow -0$	6
RES 5,A	CBAF		$A_5 \leftarrow -0$	2
RES 5,B	CBA8		$B_5 \leftarrow -0$	2
RES 5,C	CBA9		$C_5 \leftarrow -0$	2
RES 5,D	CBAA		$D_5 \leftarrow -0$	2
RES 5,E	CBAE		$E_5 \leftarrow -0$	2
RES 5,H	CBAC		$H_5 \leftarrow -0$	2
RES 5,L	CBAD		$L_5 \leftarrow -0$	2
RES 6,(HL)	CBB6		$(HL)_6 \leftarrow -0$	4
RES 6,(IX+dd)	DDCBddB6		$(IX+dd)_6 \leftarrow -0$	6
RES 6,(IY+dd)	FDCBddB6		$(IY+dd)_6 \leftarrow -0$	6
RES 6,A	CBB7		$A_6 \leftarrow -0$	2
RES 6,B	CBBO		$B_6 \leftarrow -0$	2
RES 6,C	CBB1		$C_6 \leftarrow -0$	2
RES 6,D	CBB2		$D_6 \leftarrow -0$	2
RES 6,E	CBB3		$E_6 \leftarrow -0$	2
RES 6,H	CBB4		$H_6 \leftarrow -0$	2
RES 6,L	CBB5		$L_6 \leftarrow -0$	2
RES 7,(HL)	CBBE		$(HL)_7 \leftarrow -0$	4
RES 7,(IX+dd)	DDCBddBE		$(IX+dd)_7 \leftarrow -0$	6
RES 7,(IY+dd)	FDCBddBE		$(IY+dd)_7 \leftarrow -0$	6
RES 7,A	CBBF		$A_7 \leftarrow -0$	2
RES 7,B	CBB8		$B_7 \leftarrow -0$	2
RES 7,C	CBB9		$C_7 \leftarrow -0$	2
RES 7,D	CBBA		$D_7 \leftarrow -0$	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
RES 7,E	CB9B		$E_7 \leftarrow 0$	2
RES 7,H	CB9C		$H_7 \leftarrow 0$	2
RES 7,L	CB9D		$L_7 \leftarrow 0$	2
RET	C9		$PCL \leftarrow (SP), PCH \leftarrow (HL+1)$	3
RET C	DB		Retour si c=1	1/3
RET M	FB		Retour si minus	1/3
RET NC	DD		Retour si c=0	1/3
RET NZ	CD		Retour si z=0	1/3
RET P	FD		Retour si positif	1/3
RET PE	EB		Retour si p=1	1/3
RET PO	ED		Retour si p=0	1/3
RET Z	CB		Retour si z=1	1/3
RETI	ED4D		Retour d'interruption	4
RETN	ED45		Retour d'IT non masquable	4
RL (HL)	CB16	^ ^ P ^ 0 0	Rotation $\leftarrow$ de (HL)	4
RL (IX+dd)	DDCBdd16	^ ^ P ^ 0 0	Rotation $\leftarrow$ de (IX+dd)	6
RL (IY+dd)	FDCBdd16	^ ^ P ^ 0 0	Rotation $\leftarrow$ de (IY+dd)	6
RL A	CB17	^ ^ P ^ 0 0	Rotation $\leftarrow$ de A	2
RL B	CB10	^ ^ P ^ 0 0	Rotation $\leftarrow$ de B	2
RL C	CB11	^ ^ P ^ 0 0	Rotation $\leftarrow$ de C	2
RL D	CB12	^ ^ P ^ 0 0	Rotation $\leftarrow$ de D	2
RL E	CB13	^ ^ P ^ 0 0	Rotation $\leftarrow$ de E	2
RL H	CB14	^ ^ P ^ 0 0	Rotation $\leftarrow$ de H	2
RL L	CB15	^ ^ P ^ 0 0	Rotation $\leftarrow$ de L	2
RLA	17	^ 0 0	Rotation $\leftarrow$ de A	1
RLC (HL)	CB06	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de (HL)	4
RLC (IX+dd)	DDCBdd06	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de (IX+dd)	6
RLC (IY+dd)	FDCBdd06	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de (IY+dd)	6
RLC A	CB07	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de A	2
RLC B	CB00	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de B	2
RLC C	CB01	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de C	2
RLC D	CB02	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de D	2
RLC E	CB03	^ ^ P ^ 0 0	Rot. circ. $\leftarrow$ de E	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
RLC H	CB04	^ ^ P ^ 0 0	Rot. circ. <- de H	2
RLC L	CB05	^ ^ P ^ 0 0	Rot. circ. <- de L	2
RLCA	07	^ . . . 0 0	Rot. circ. <- de A	1
RLD	ED6F	. ^ P ^ 0 0	Rot. décimale à gauche	5
RR (HL)	CB1E	^ ^ P ^ 0 0	Rotation -> de (HL)	4
RR (IX+dd)	DDCBdd1E	^ ^ P ^ 0 0	Rotation -> de (IX+dd)	6
RR (IY+dd)	FDCBdd1E	^ ^ P ^ 0 0	Rotation -> de (IY+dd)	6
RR A	CB1F	^ ^ P ^ 0 0	Rotation -> de A	2
RR B	CB18	^ ^ P ^ 0 0	Rotation -> de B	2
RR C	CB19	^ ^ P ^ 0 0	Rotation -> de C	2
RR D	CB1A	^ ^ P ^ 0 0	Rotation -> de D	2
RR E	CB1B	^ ^ P ^ 0 0	Rotation -> de E	2
RR H	CB1C	^ ^ P ^ 0 0	Rotation -> de H	2
RR L	CB1D	^ ^ P ^ 0 0	Rotation -> de L	2
RRA	1F	^ . . . 0 0	Rotation -> de A	1
RRC (HL)	CBOE	^ ^ P ^ 0 0	Rot. circ. -> de (HL)	4
RRC (IX+dd)	DDCBdd0E	^ ^ P ^ 0 0	Rot. circ. -> de (IX+dd)	6
RRC (IY+dd)	FDCBdd0E	^ ^ P ^ 0 0	Rot. circ. -> de (IY+dd)	6
RRC A	CBOF	^ ^ P ^ 0 0	Rot. circ. -> de A	2
RRC B	CBO8	^ ^ P ^ 0 0	Rot. circ. -> de B	2
RRC C	CBO9	^ ^ P ^ 0 0	Rot. circ. -> de C	2
RRC D	CBOA	^ ^ P ^ 0 0	Rot. circ. -> de D	2
RRC E	CBOB	^ ^ P ^ 0 0	Rot. circ. -> de E	2
RRC H	CB0C	^ ^ P ^ 0 0	Rot. circ. -> de H	2
RRC L	CB0D	^ ^ P ^ 0 0	Rot. circ. -> de L	2
RRCA	0F	^ . . . 0 0	Rot. circ. -> de A	1
RRD	ED67	. ^ P ^ 0 0	Rot. décimale droite	5
RST 00	C7		(SP-1)<-PCH, (SP-2)<-PCL PCH<-00, PCL<-00	3
RST 08	CF		(SP-1)<-PCH, (SP-2)<-PCL PCH<-00, PCL<-08	3
RST 10H	D7		(SP-1)<-PCH, (SP-2)<-PCL PCH<-00, PCL<-10	3

Mnémonique	Op-code	c z p s n h v	Opération symbolique	Cycles machine
RST 18H	DF		(SP-1)←PCH, (SP-2)←PCL PCH←00, PCL←18	3
RST 20H	E7		(SP-1)←PCH, (SP-2)←PCL PCH←00, PCL←20	3
RST 28H	EF		(SP-1)←PCH, (SP-2)←PCL PCH←00, PCL←28	3
RST 30H	F7		(SP-1)←PCH, (SP-2)←PCL PCH←00, PCL←30	3
RST 38H	FF		(SP-1)←PCH, (SP-2)←PCL PCH←00, PCL←38	3
SBC A, (HL)	9E	^ ^ V ^ 1 ^	A←A-(HL)-c	2
SBC A, (IX+dd)	DD9Edd	^ ^ V ^ 1 ^	A←A-(IX+dd)-c	5
SBC A, (IY+dd)	FD9Edd	^ ^ V ^ 1 ^	A←A-(IY+dd)-c	5
SBC A, A	9F	^ ^ V ^ 1 ^	A←A-A-c	1
SBC A, B	98	^ ^ V ^ 1 ^	A←A-B-c	1
SBC A, C	99	^ ^ V ^ 1 ^	A←A-C-c	1
SBC A, D	9A	^ ^ V ^ 1 ^	A←A-D-c	1
SBC A, E	9B	^ ^ V ^ 1 ^	A←A-E-c	1
SBC A, H	9C	^ ^ V ^ 1 ^	A←A-H-c	1
SBC A, L	9D	^ ^ V ^ 1 ^	A←A-L-c	1
SBC A, N	DEnn	^ ^ V ^ 1 ^	A←A-nn-c	2
SBC HL, BC	ED42	^ ^ V ^ 1 X	HL←HL-BC-c	4
SBC HL, DE	ED52	^ ^ V ^ 1 X	HL←HL-DE-c	4
SBC HL, HL	ED62	^ ^ V ^ 1 X	HL←HL-HL-c	4
SBC HL, SP	ED72	^ ^ V ^ 1 X	HL←HL-SP-c	4
SCF	37	1 . . . 0 0	c←1	1
SET 0, (HL)	CBC6		(HL) ₀ ←1	4
SET 0, (IX+dd)	DDCBddC6		(IX+dd) ₀ ←1	6
SET 0, (IY+dd)	FDCBddC6		(IY+dd) ₀ ←1	6
SET 0, A	CBC7		A ₀ ←1	2
SET 0, B	CBC0		B ₀ ←1	2
SET 0, C	CBC1		C ₀ ←1	2
SET 0, D	CBC2		D ₀ ←1	2
SET 0, E	CBC3		E ₀ ←1	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
SET 0,H	CBC4		$H_0 \leftarrow -1$	2
SET 0,L	CBC5		$L_0 \leftarrow -1$	2
SET 1,(HL)	CBCE		$(HL)_1 \leftarrow -1$	4
SET 1,(IX+dd)	DDCBddCE		$(IX+dd)_1 \leftarrow -1$	6
SET 1,(IY+dd)	FDCBddCE		$(IY+dd)_1 \leftarrow -1$	6
SET 1,A	CBCF		$A_1 \leftarrow -1$	2
SET 1,B	CBC8		$B_1 \leftarrow -1$	2
SET 1,C	CBC9		$C_1 \leftarrow -1$	2
SET 1,D	CBCA		$D_1 \leftarrow -1$	2
SET 1,E	CBCB		$E_1 \leftarrow -1$	2
SET 1,H	CBCC		$H_1 \leftarrow -1$	2
SET 1,L	CBCD		$L_1 \leftarrow -1$	2
SET 2,(HL)	CBD6		$(HL)_2 \leftarrow -1$	4
SET 2,(IX+dd)	DDCBddD6		$(IX+dd)_2 \leftarrow -1$	6
SET 2,(IY+dd)	FDCBddD6		$(IY+dd)_2 \leftarrow -1$	6
SET 2,A	CBD7		$A_2 \leftarrow -1$	2
SET 2,B	CBDD		$B_2 \leftarrow -1$	2
SET 2,C	CBD1		$C_2 \leftarrow -1$	2
SET 2,D	CBD2		$D_2 \leftarrow -1$	2
SET 2,E	CBD3		$E_2 \leftarrow -1$	2
SET 2,H	CBD4		$H_2 \leftarrow -1$	2
SET 2,L	CBD5		$L_2 \leftarrow -1$	2
SET 3,(HL)	CBDE		$(HL)_3 \leftarrow -1$	4
SET 3,(IX+dd)	DDCBddDE		$(IX+dd)_3 \leftarrow -1$	6
SET 3,(IY+dd)	FDCBddDE		$(IY+dd)_3 \leftarrow -1$	6
SET 3,A	CBDF		$A_3 \leftarrow -1$	2
SET 3,B	CBDB		$B_3 \leftarrow -1$	2
SET 3,C	CBD9		$C_3 \leftarrow -1$	2
SET 3,D	CBDA		$D_3 \leftarrow -1$	2
SET 3,E	CBDB		$E_3 \leftarrow -1$	2
SET 3,H	CBDC		$H_3 \leftarrow -1$	2
SET 3,L	CBDD		$L_3 \leftarrow -1$	2
SET 4,(HL)	CBE6		$(HL)_4 \leftarrow -1$	4

Mnémonique	Op-code	c z p s n h v	Opération symbolique	Cycles machine
SET 4, (IX+dd)	DDCBddE6		$(IX+dd)_4 \leftarrow -1$	6
SET 4, (IY+dd)	FDCBddE6		$(IY+dd)_4 \leftarrow -1$	6
SET 4, A	CBE7		$A_4 \leftarrow -1$	2
SET 4, B	CBE0		$B_4 \leftarrow -1$	2
SET 4, C	CBE1		$C_4 \leftarrow -1$	2
SET 4, D	CBE2		$D_4 \leftarrow -1$	2
SET 4, E	CBE3		$E_4 \leftarrow -1$	2
SET 4, H	CBE4		$H_4 \leftarrow -1$	2
SET 4, L	CBE5		$L_4 \leftarrow -1$	2
SET 5, (HL)	CBEE		$(HL)_5 \leftarrow -1$	4
SET 5, (IX+dd)	DDCBddEE		$(IX+dd)_5 \leftarrow -1$	6
SET 5, (IY+dd)	FDCBddEE		$(IY+dd)_5 \leftarrow -1$	6
SET 5, A	CBEF		$A_5 \leftarrow -1$	2
SET 5, B	CBEB		$B_5 \leftarrow -1$	2
SET 5, C	CBE9		$C_5 \leftarrow -1$	2
SET 5, D	CBEA		$D_5 \leftarrow -1$	2
SET 5, E	CBEB		$E_5 \leftarrow -1$	2
SET 5, H	CBEC		$H_5 \leftarrow -1$	2
SET 5, L	CBED		$L_5 \leftarrow -1$	2
SET 6, (HL)	CBF6		$(HL)_6 \leftarrow -1$	4
SET 6, (IX+dd)	DDCBddF6		$(IX+dd)_6 \leftarrow -1$	6
SET 6, (IY+dd)	FDCBddF6		$(IY+dd)_6 \leftarrow -1$	6
SET 6, A	CBF7		$A_6 \leftarrow -1$	2
SET 6, B	CBF0		$B_6 \leftarrow -1$	2
SET 6, C	CBF1		$C_6 \leftarrow -1$	2
SET 6, D	CBF2		$D_6 \leftarrow -1$	2
SET 6, E	CBF3		$E_6 \leftarrow -1$	2
SET 6, H	CBF4		$H_6 \leftarrow -1$	2
SET 6, L	CBF5		$L_6 \leftarrow -1$	2
SET 7, (HL)	CBFE		$(HL)_7 \leftarrow -1$	4
SET 7, (IX+dd)	DDCBddFE		$(IX+dd)_7 \leftarrow -1$	6
SET 7, (IY+dd)	FDCBddFE		$(IY+dd)_7 \leftarrow -1$	6
SET 7, A	CBFF		$A_7 \leftarrow -1$	2

Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
		v		
SET 7,B	CBF8		$B_7 \leftarrow -1$	2
SET 7,C	CBF9		$C_7 \leftarrow -1$	2
SET 7,D	CBFA		$D_7 \leftarrow -1$	2
SET 7,E	CBFB		$E_7 \leftarrow -1$	2
SET 7,H	CBFC		$H_7 \leftarrow -1$	2
SET 7,L	CBFD		$L_7 \leftarrow -1$	2
SLA (HL)	CB26	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. (IX)	4
SLA (IX+dd)	DDCBdd26	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. (IX+dd)	6
SLA (IY+dd)	FDCBdd26	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. (IY+dd)	6
SLA A	CB27	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. A	2
SLA B	CB20	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. B	2
SLA C	CB21	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. C	2
SLA D	CB22	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. D	2
SLA E	CB23	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. E	2
SLA H	CB24	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. H	2
SLA L	CB25	^ ^ P ^ 0 0	Décal. $\leftarrow$ arith. L	2
SRA (HL)	CB2E	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. (IX)	4
SRA (IX+dd)	DDCBdd2E	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. (IX+dd)	6
SRA (IY+dd)	FDCBdd2E	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. (IY+dd)	6
SRA A	CB2F	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. A	2
SRA B	CB28	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. B	2
SRA C	CB29	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. C	2
SRA D	CB2A	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. D	2
SRA E	CB2B	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. E	2
SRA H	CB2C	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. H	2
SRA L	CB2D	^ ^ P ^ 0 0	Décal. $\rightarrow$ arith. L	2
SRL (HL)	CB3E	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique (HL)	4
SRL (IX+dd)	DDCBdd3E	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique (IX+dd)	6
SRL (IY+dd)	FDCBdd3E	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique (IY+dd)	6
SRL A	CB3F	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique A	2
SRL B	CB38	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique B	2
SRL C	CB39	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique C	2
SRL D	CB3A	^ ^ P ^ 0 0	Décal. $\rightarrow$ logique D	2

	Mnémonique	Op-code	c z p s n h	Opération symbolique	Cycles machine
			v		
1	SRL E	CB3B	^ ^ P ^ 0 0	Décal. -> logique E	2
2	SRL H	CB3C	^ ^ P ^ 0 0	Décal. -> logique H	2
3	SRL L	CB3D	^ ^ P ^ 0 0	Décal. -> logique L	2
4	SUB (HL)	96	^ ^ V ^ 1 ^	A<-A-(HL)	2
5	SUB (IX+dd)	DD96dd	^ ^ V ^ 1 ^	A<-A-(IX+dd)	5
6	SUB (IY+dd)	FD96dd	^ ^ V ^ 1 ^	A<-A-(IY+dd)	5
7	SUB A	97	^ ^ V ^ 1 ^	A<-A-A	1
8	SUB B	90	^ ^ V ^ 1 ^	A<-A-B	1
9	SUB C	91	^ ^ V ^ 1 ^	A<-A-C	1
10	SUB D	92	^ ^ V ^ 1 ^	A<-A-D	1
11	SUB E	93	^ ^ V ^ 1 ^	A<-A-E	1
12	SUB H	94	^ ^ V ^ 1 ^	A<-A-H	1
13	SUB L	95	^ ^ V ^ 1 ^	A<-A-L	1
14	SUB N	D6nn	^ ^ V ^ 1 ^	A<-A-nn	2
15	XOR (HL)	AE	0 ^ P ^ 0 0	A<-A XOR (HL)	2
16	XOR (IX+dd)	DDAEdd	0 ^ P ^ 0 0	A<-A XOR (IX+dd)	5
17	XOR (IY+dd)	FDAEdd	0 ^ P ^ 0 0	A<-A XOR (IY+dd)	5
18	XOR A	AF	0 ^ P ^ 0 0	A<-A XOR A	1
19	XOR B	AB	0 ^ P ^ 0 0	A<-A XOR B	1
20	XOR C	A9	0 ^ P ^ 0 0	A<-A XOR C	1
21	XOR D	AA	0 ^ P ^ 0 0	A<-A XOR D	1
22	XOR E	AB	0 ^ P ^ 0 0	A<-A XOR E	1
23	XOR H	AC	0 ^ P ^ 0 0	A<-A XOR H	1
24	XOR L	AD	0 ^ P ^ 0 0	A<-A XOR L	1
25	XOR N	EEnn	0 ^ P ^ 0 0	A<-A XOR nn	2

Indicateurs :

C = Carry = Retenue

Z = Zéro

P = Parity = Parité

V = Overflow = Débordement

S = Sign = Signe

N = Négative = Négatif

H = Half-carry = Demi-retenue

^ signifie que l'indicateur est affecté par l'instruction,

0 signifie que l'indicateur est à 0 en fin d'instruction,

1 signifie que l'indicateur est à 1 en fin d'instruction,

P signifie que p est affecté par l'instruction,

V signifie que v est affecté par l'instruction,

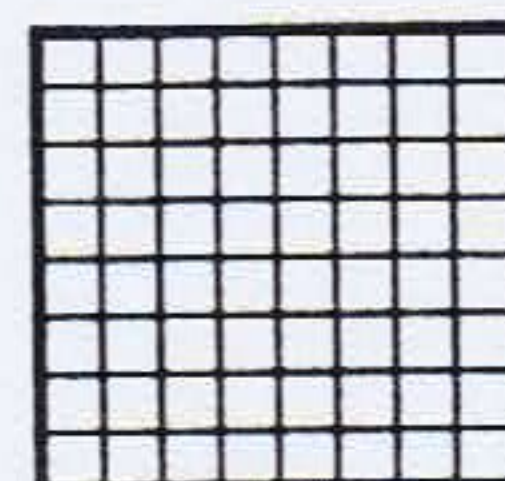
. signifie que l'indicateur est inchangé après l'instruction,

X signifie que la valeur de l'indicateur ne doit pas être considérée,

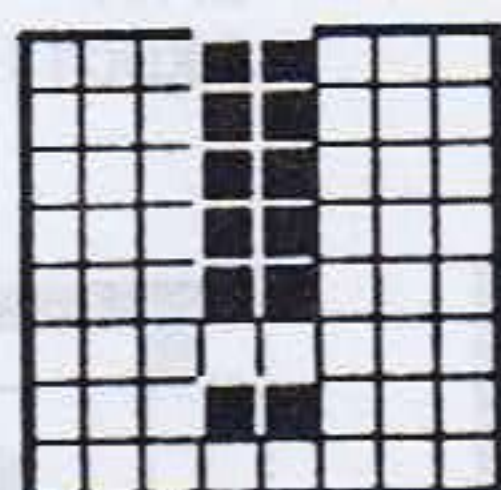
i est l'indicateur d'interruptions IFF.

Annexe 3

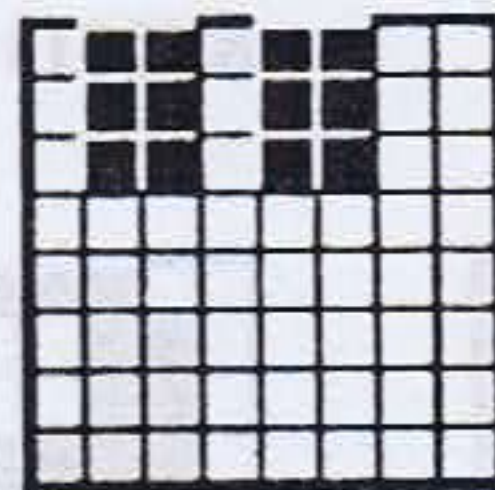
Caractères standard et graphique
de l'AMSTRAD CPC 464



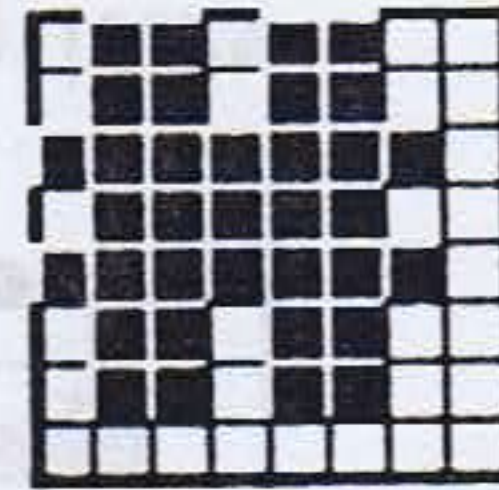
32 &H20
&X00100000



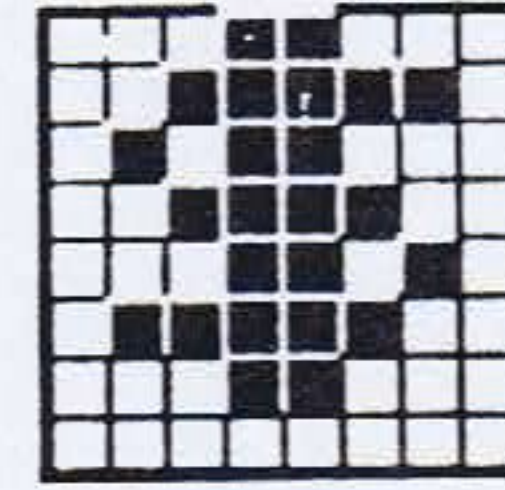
33
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&X00100001



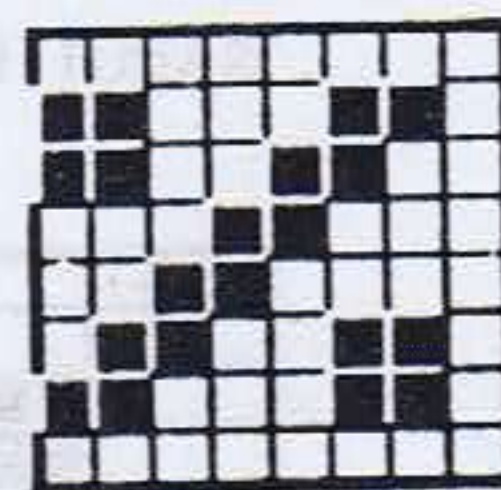
34
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&X00100010



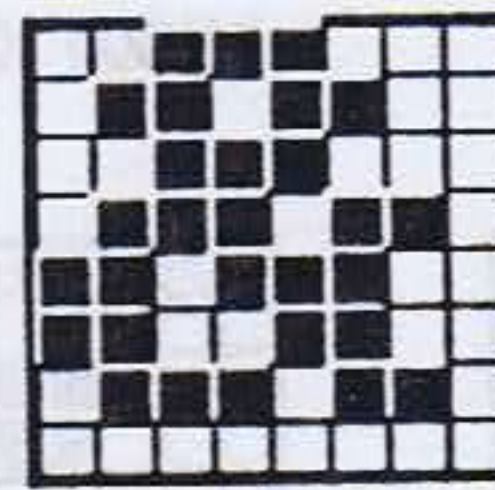
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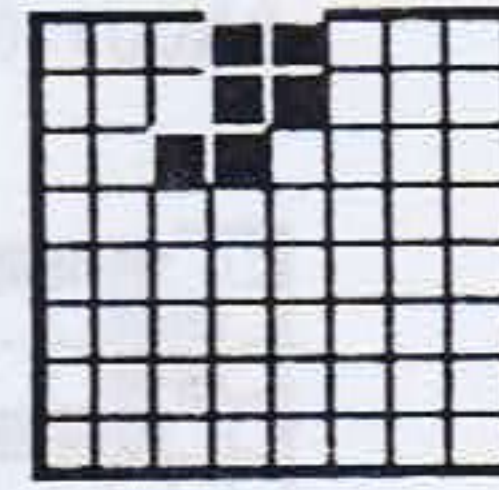
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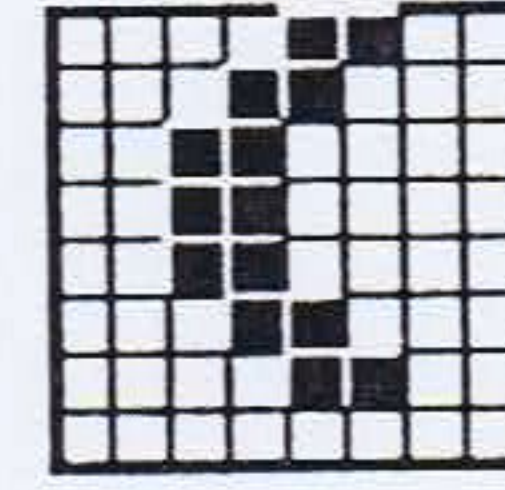
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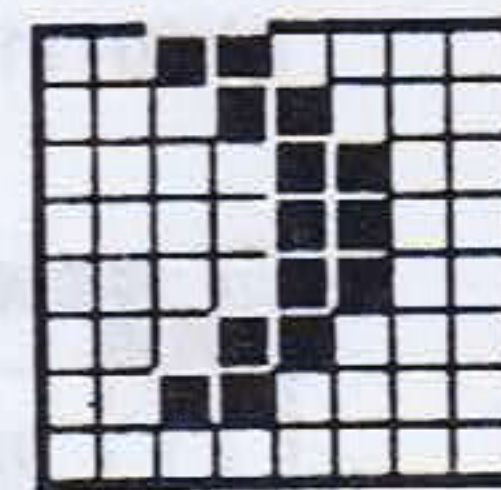
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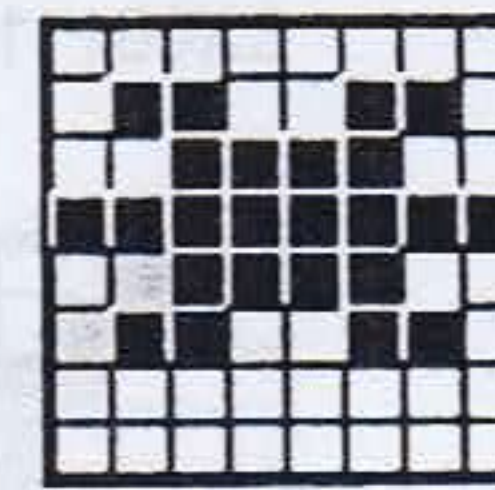
39
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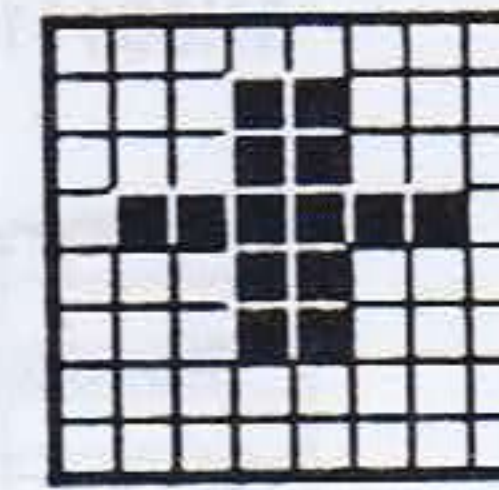
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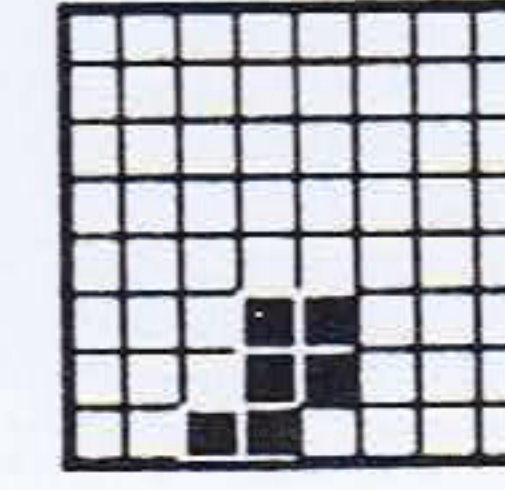
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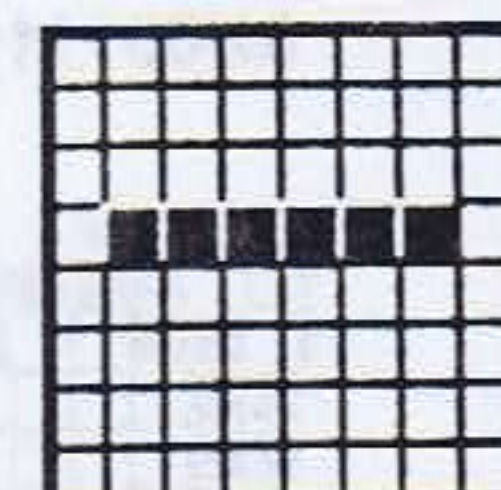
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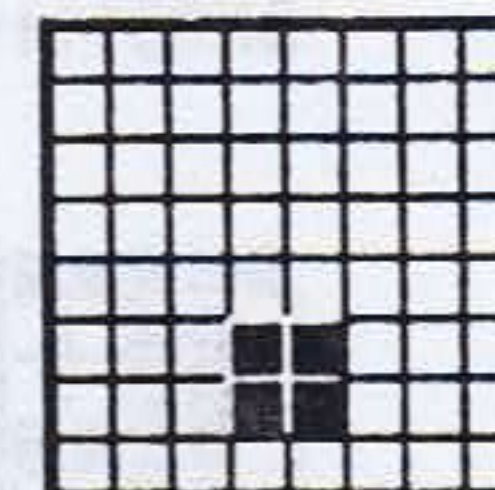
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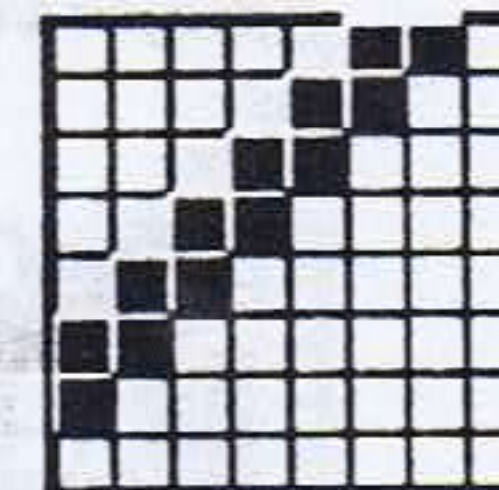
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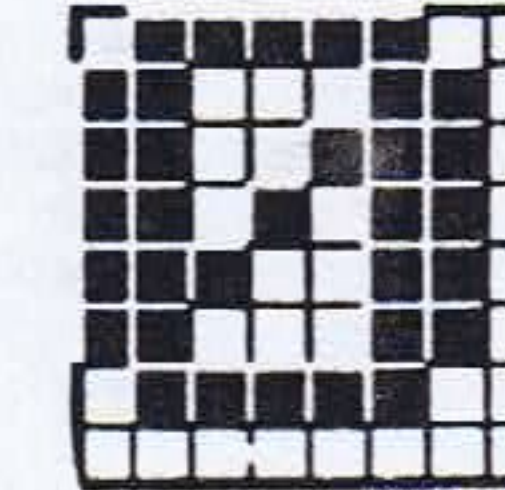
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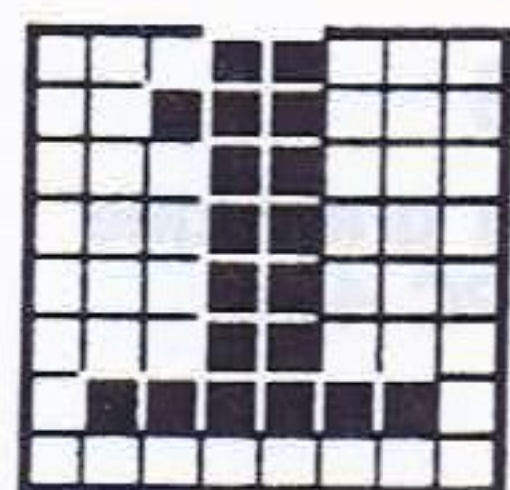
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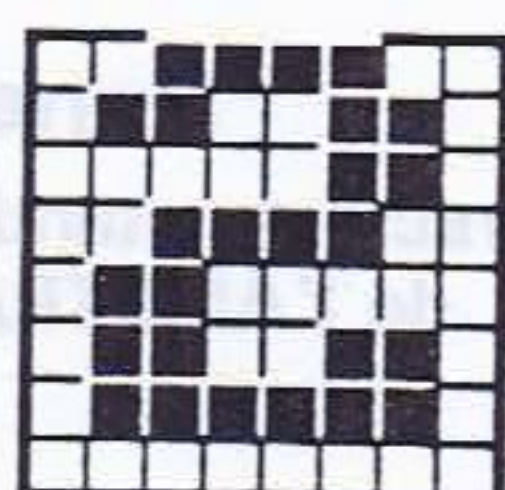
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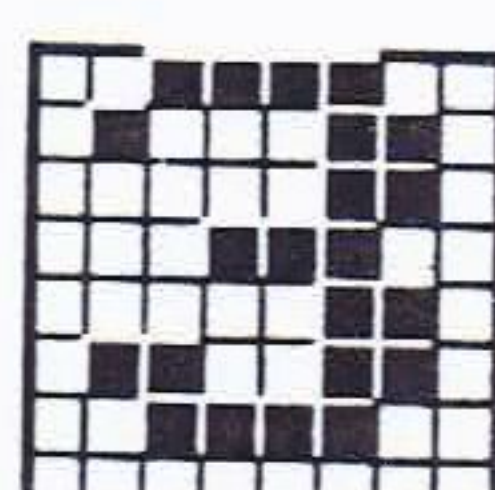
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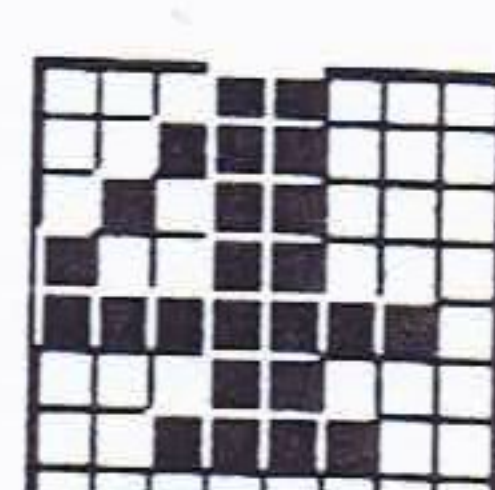
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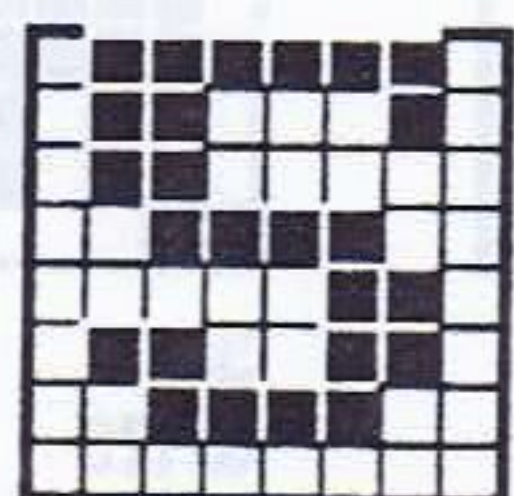
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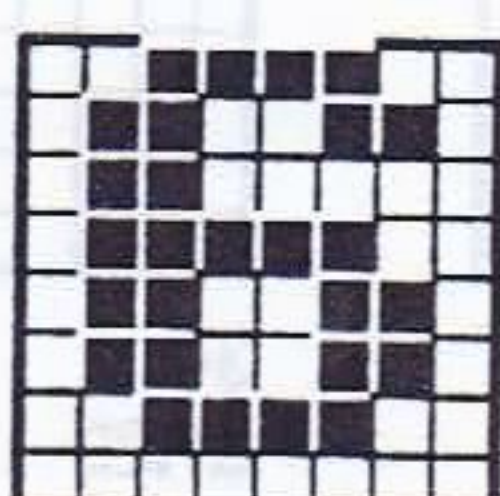
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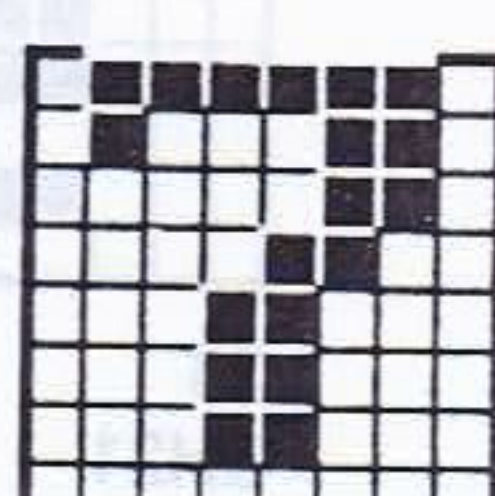
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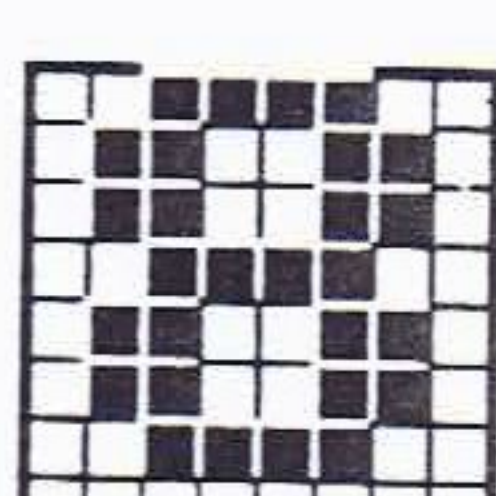
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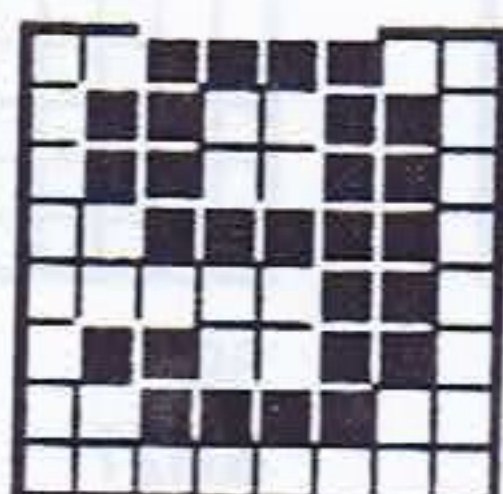
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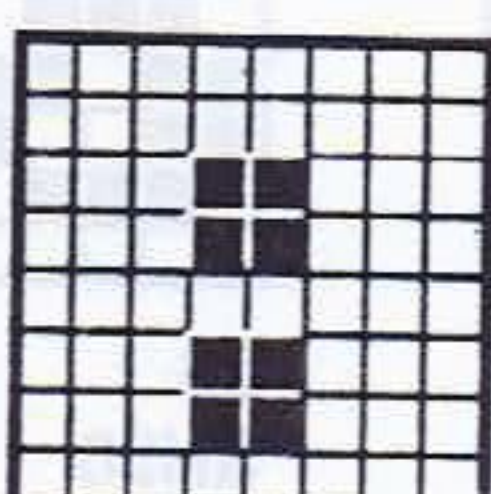
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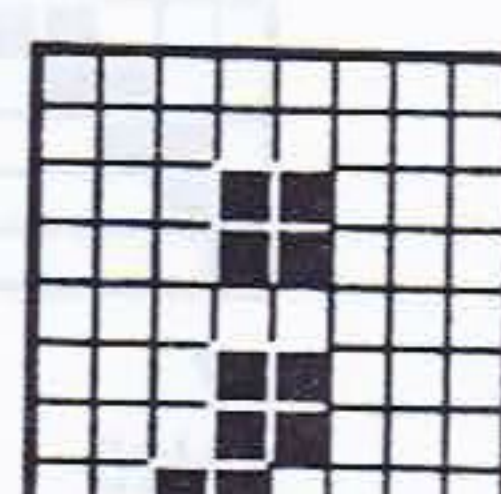
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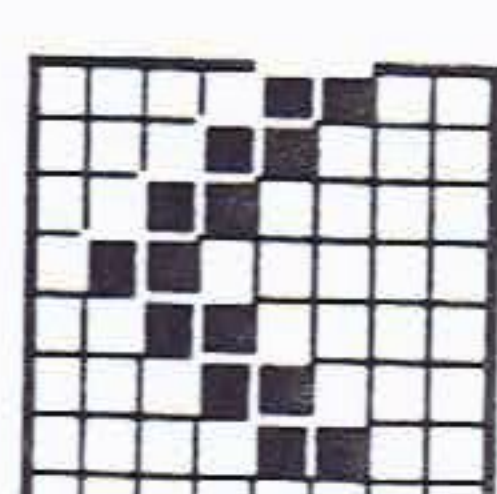
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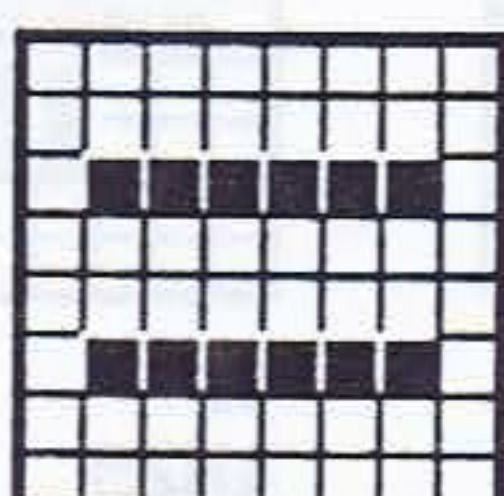
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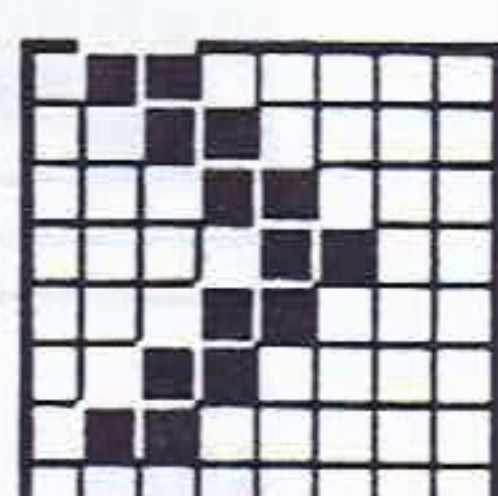
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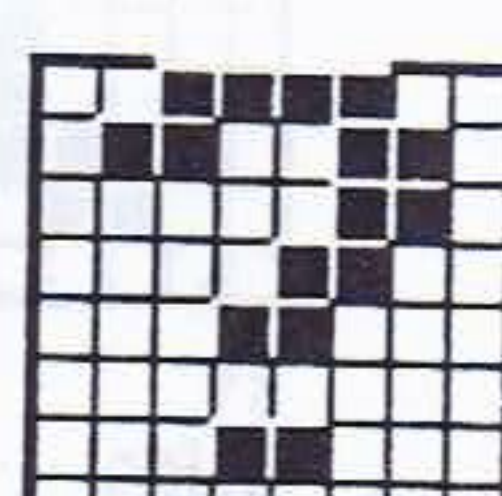
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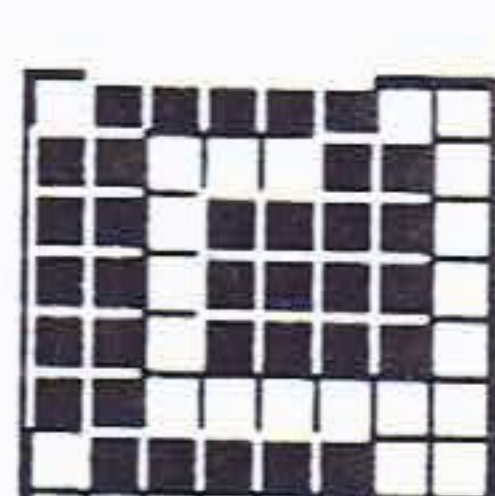
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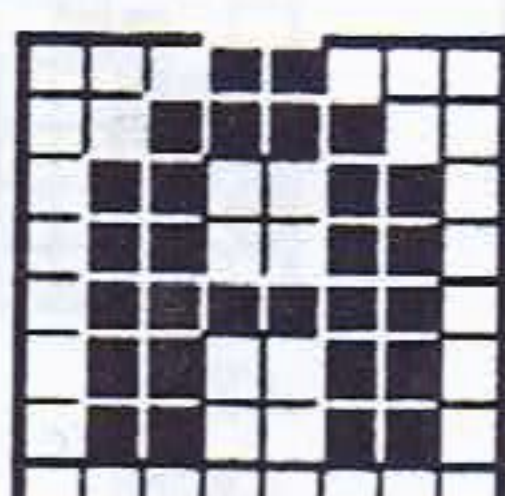
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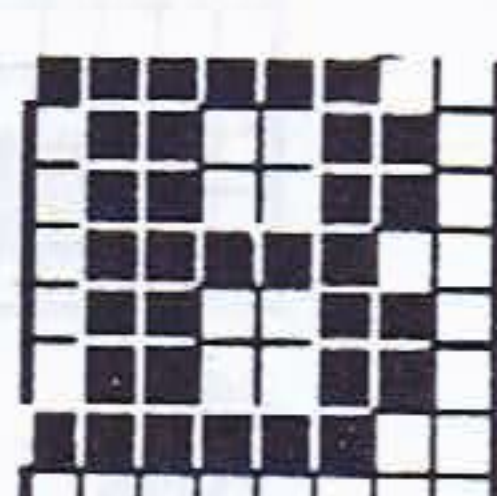
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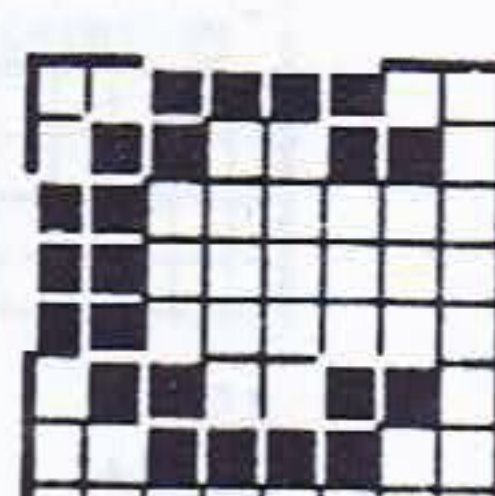
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65
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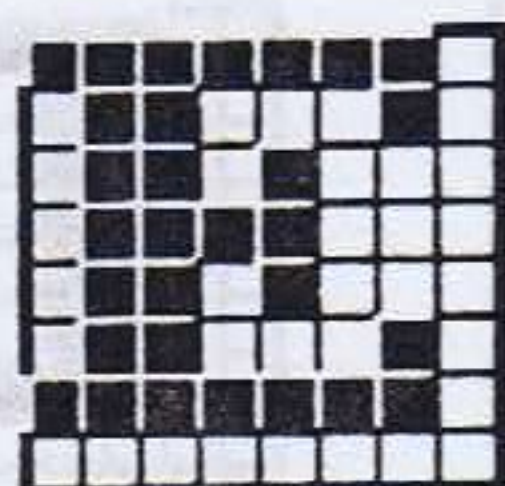
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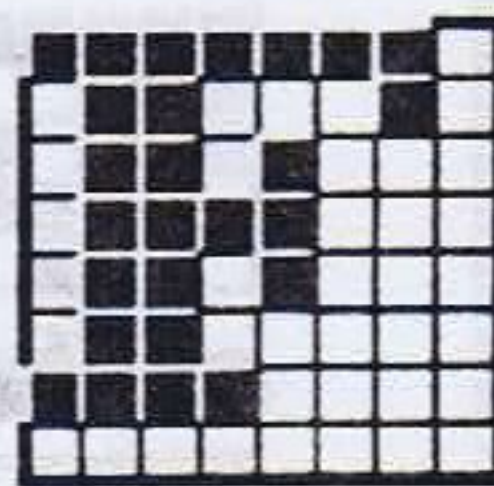
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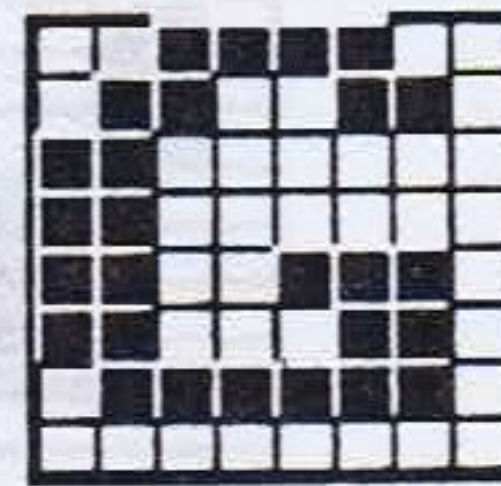
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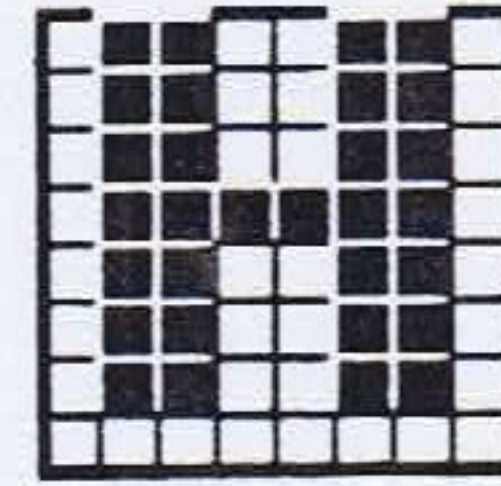
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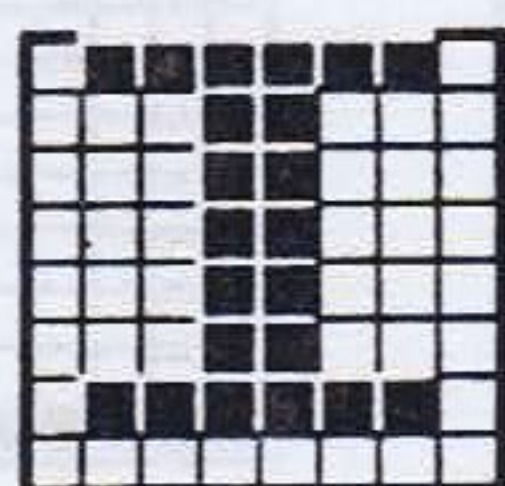
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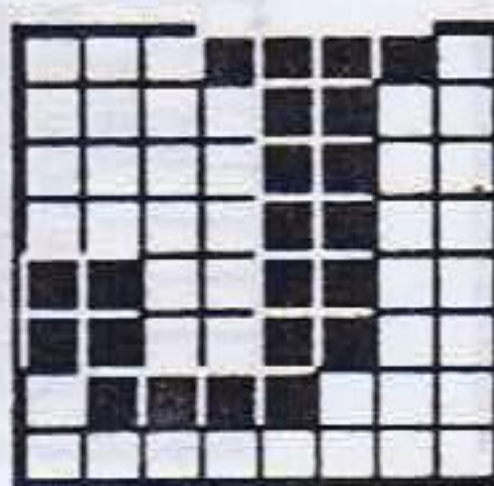
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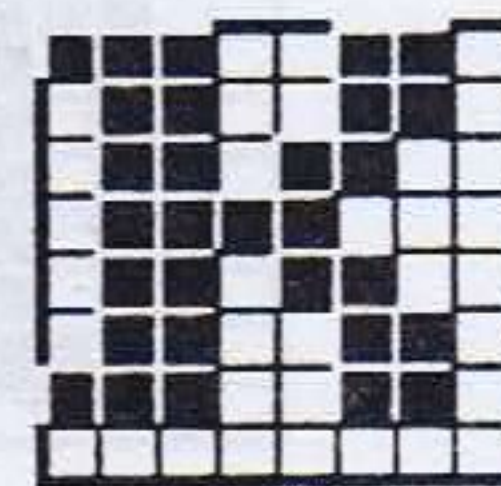
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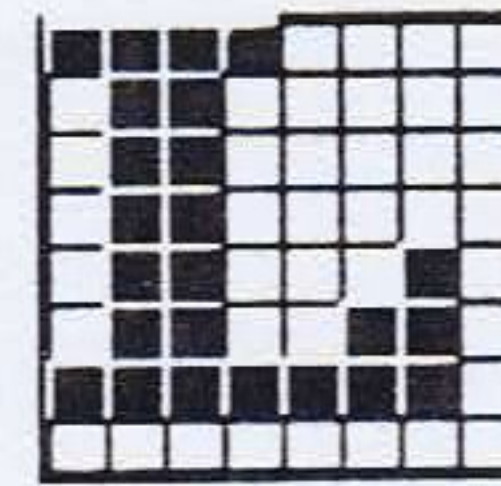
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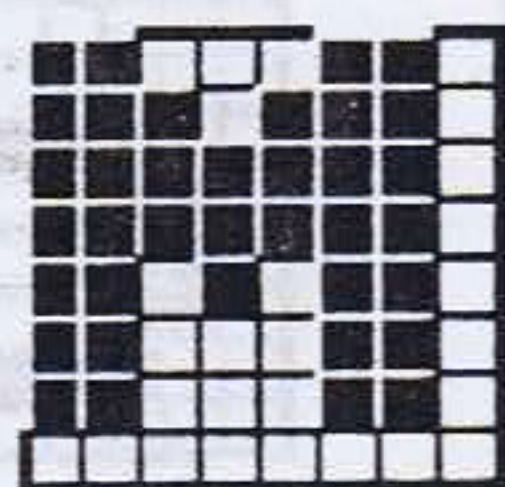
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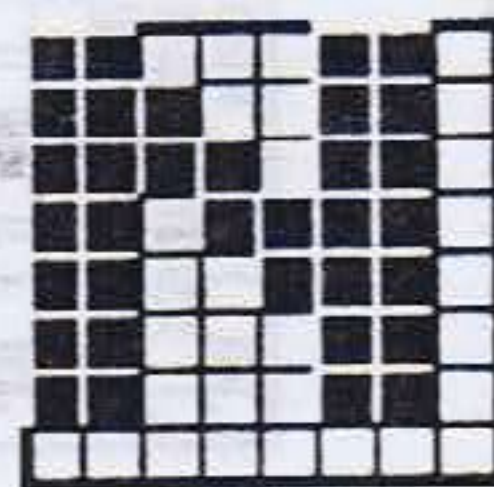
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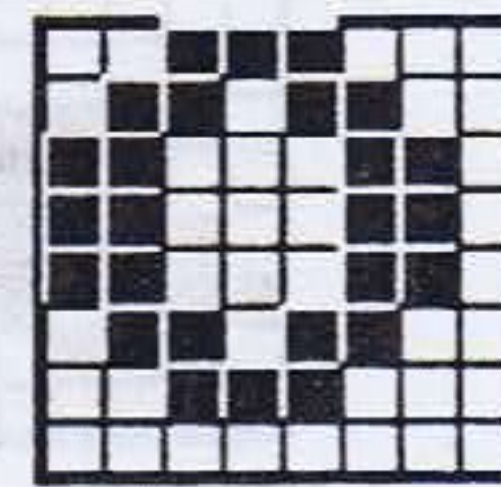
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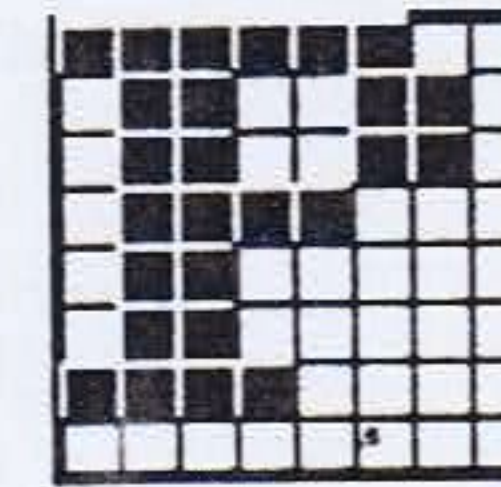
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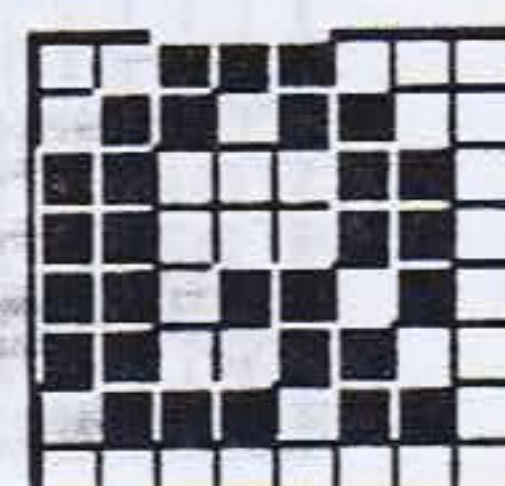
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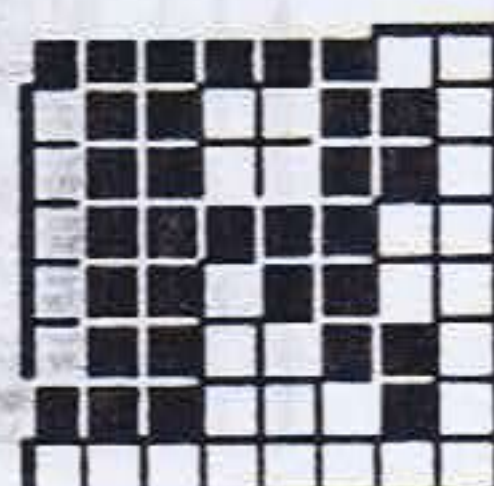
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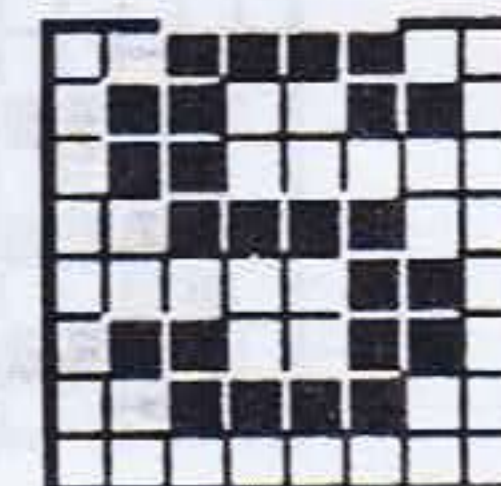
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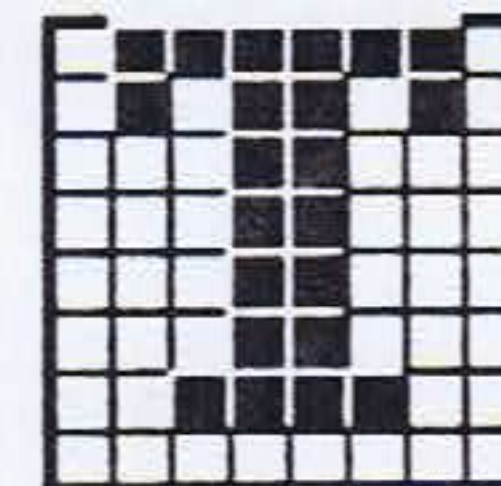
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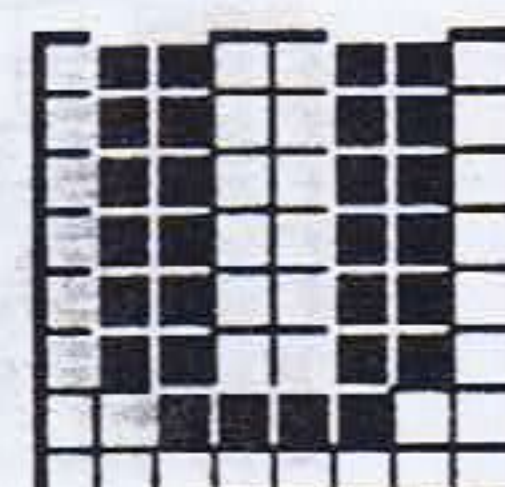
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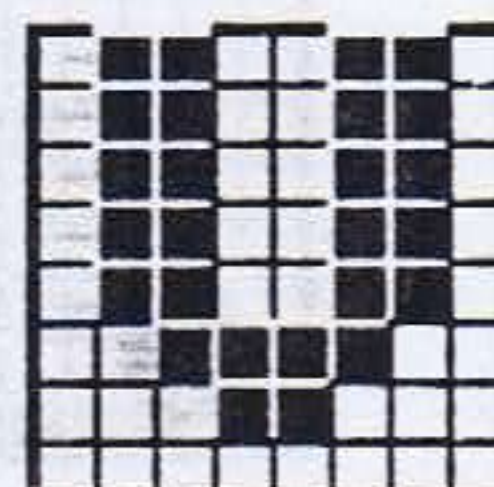
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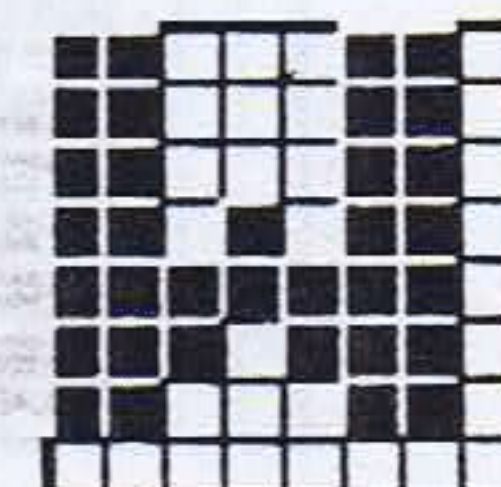
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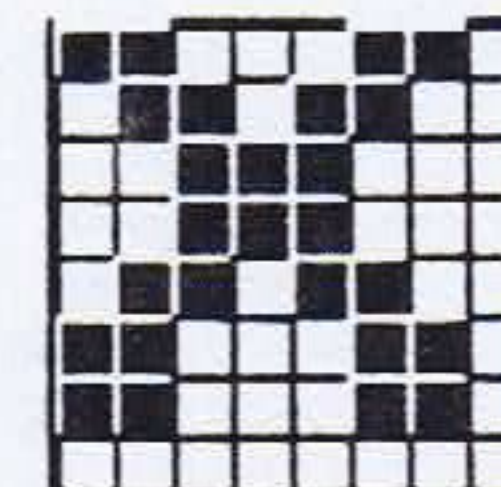
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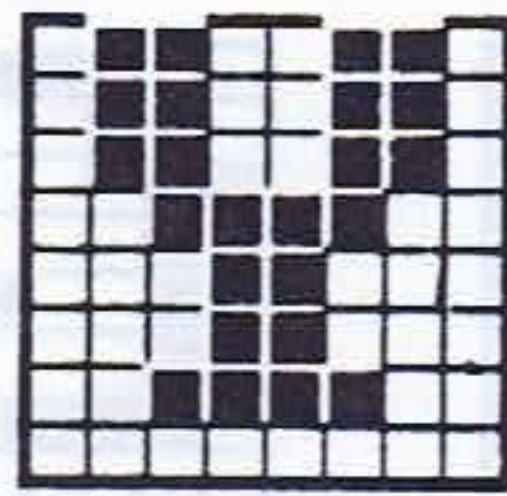
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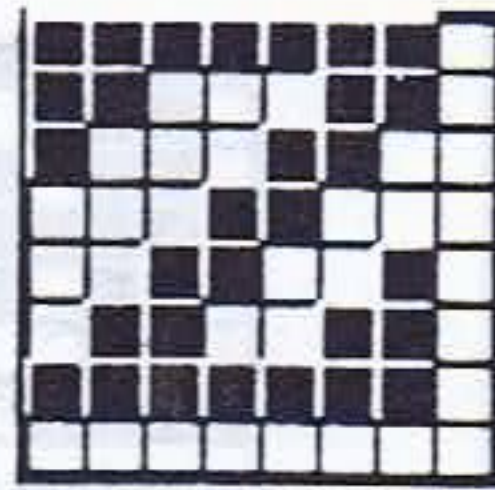
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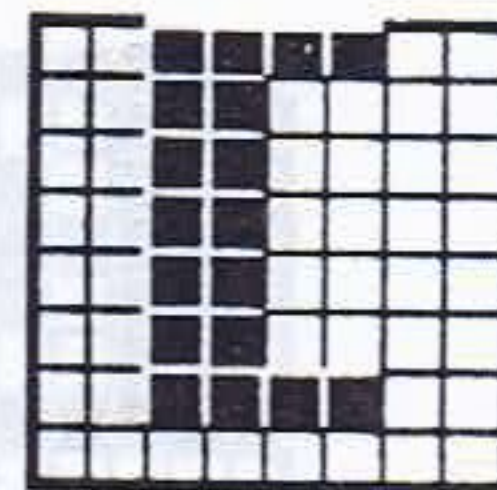
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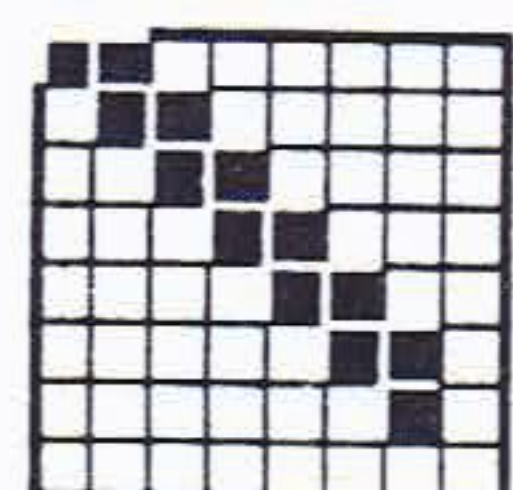
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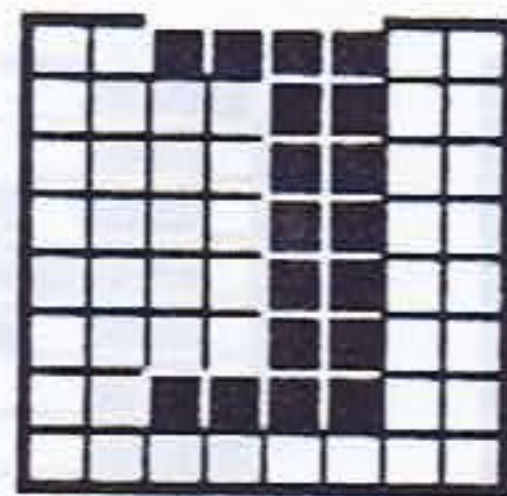
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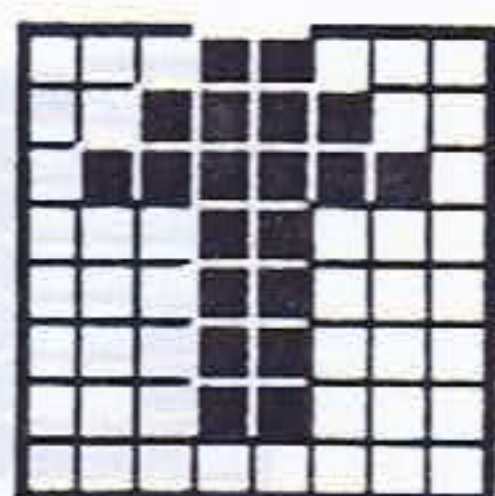
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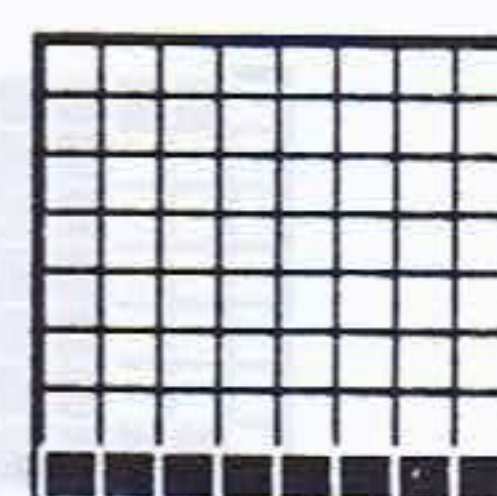
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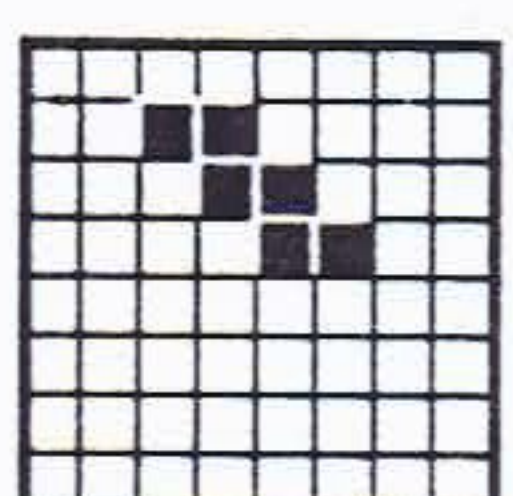
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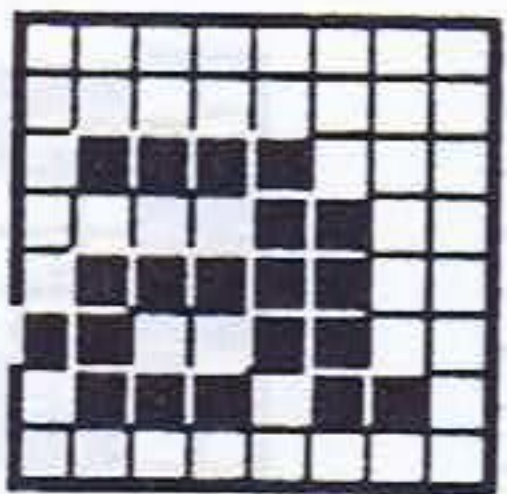
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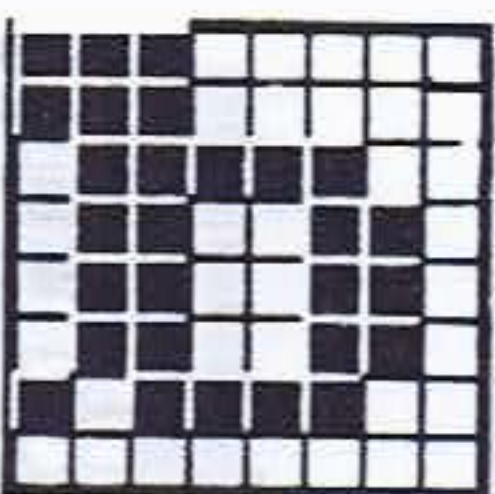
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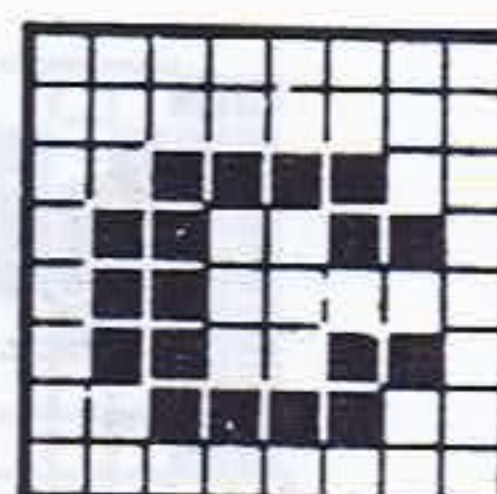
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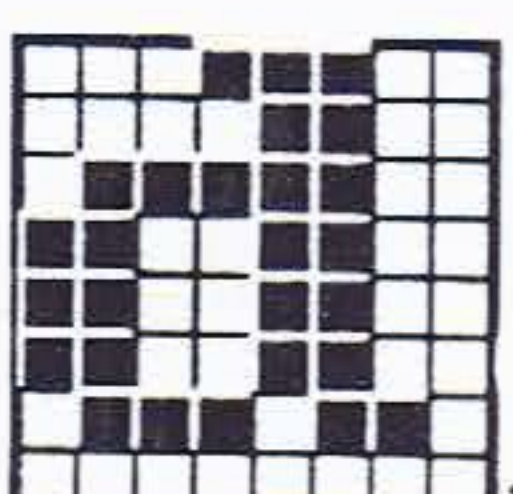
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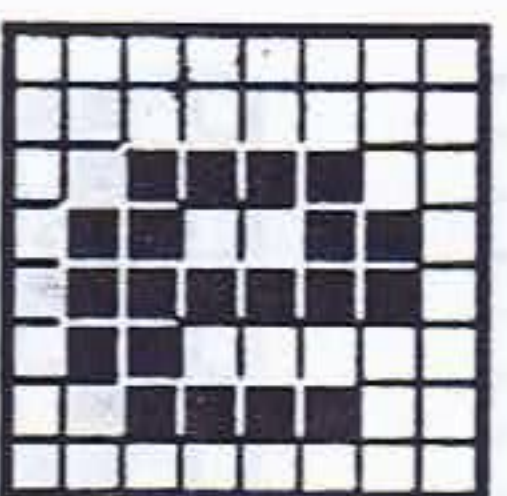
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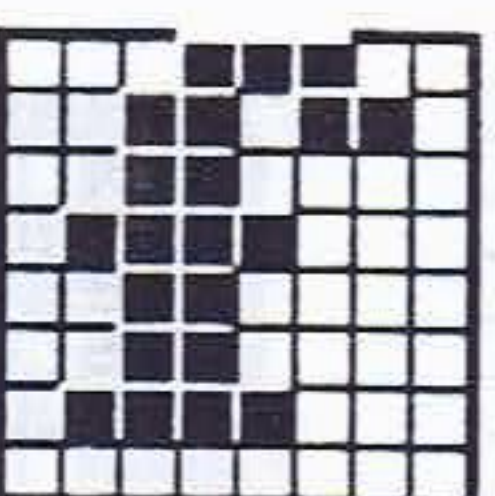
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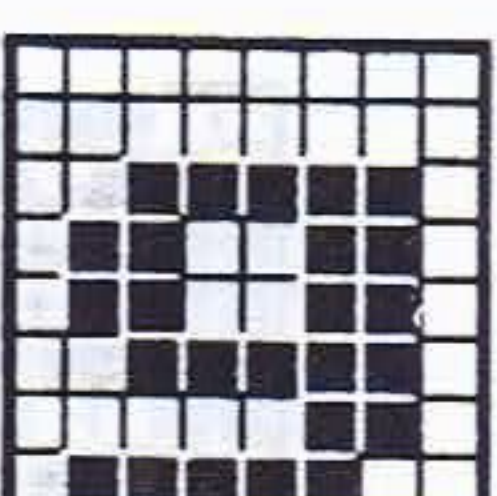
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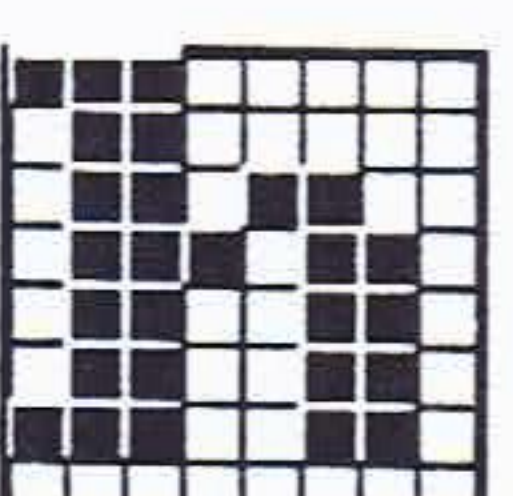
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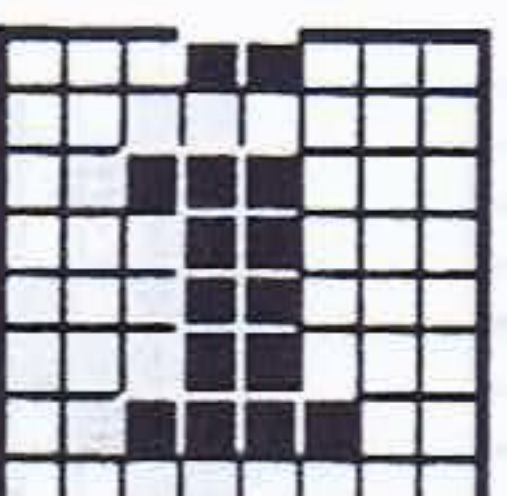
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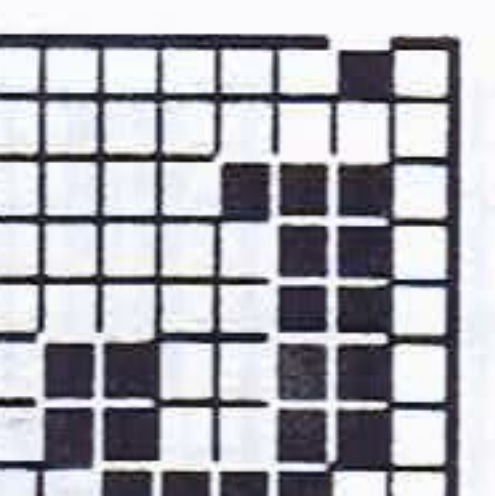
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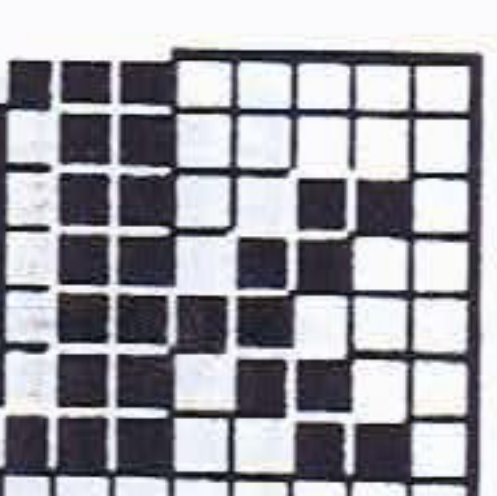
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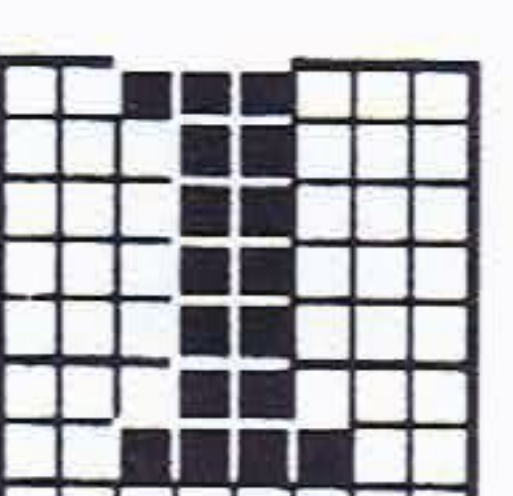
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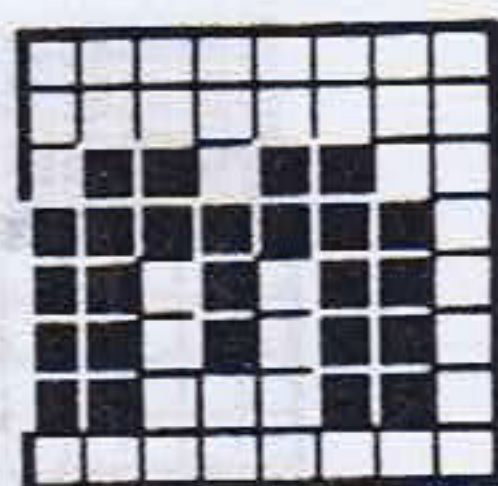
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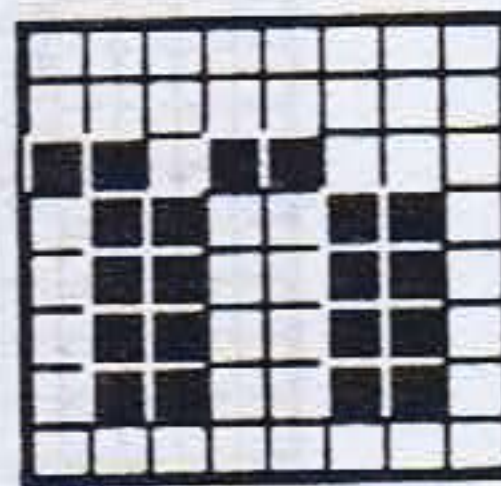
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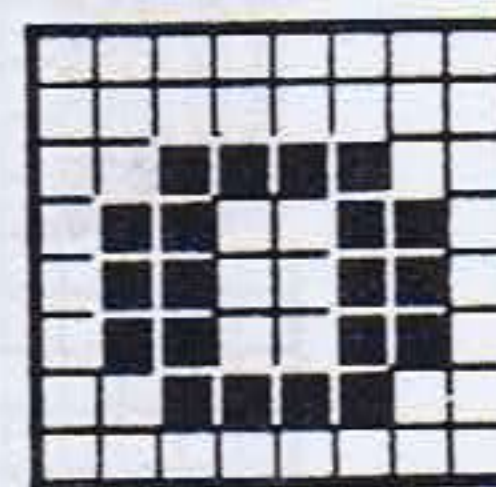
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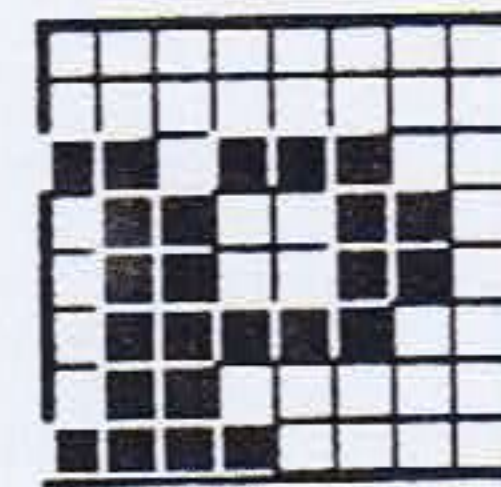
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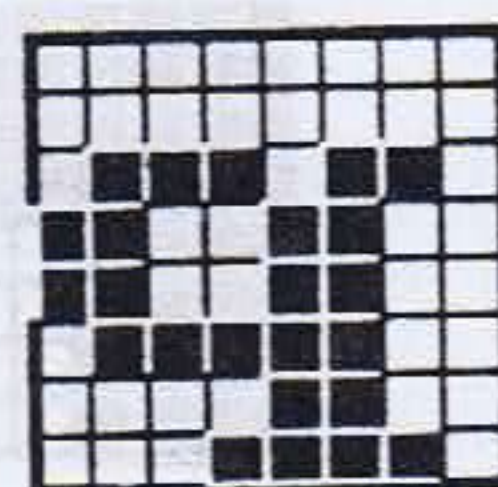
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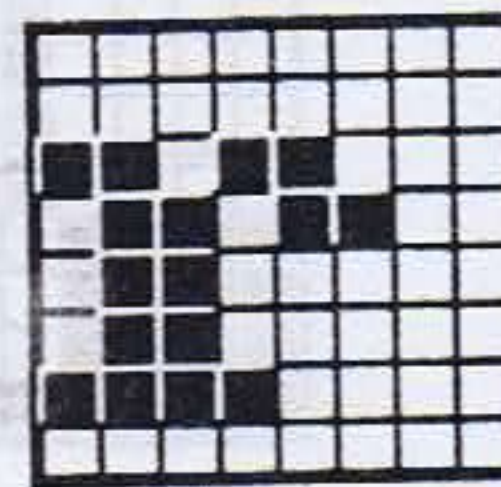
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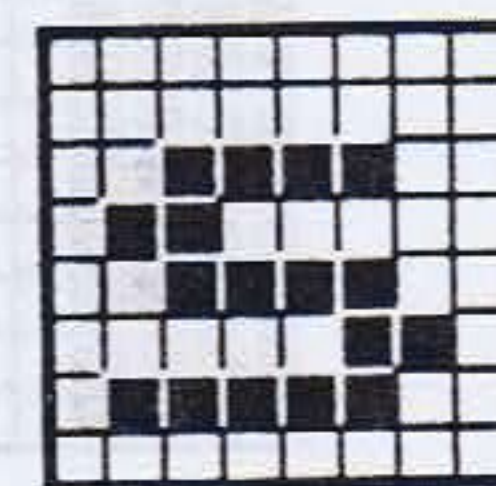
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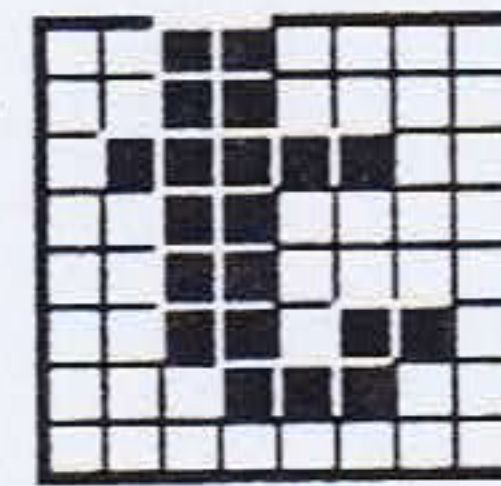
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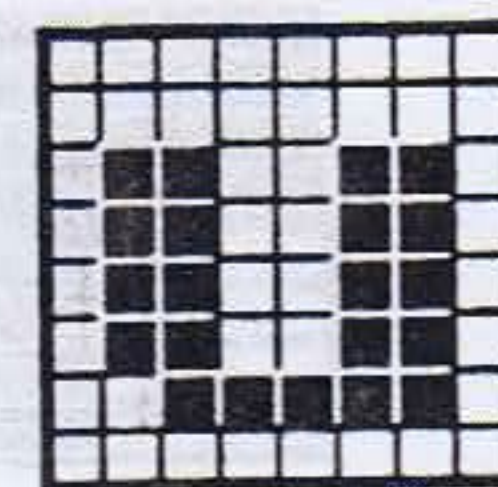
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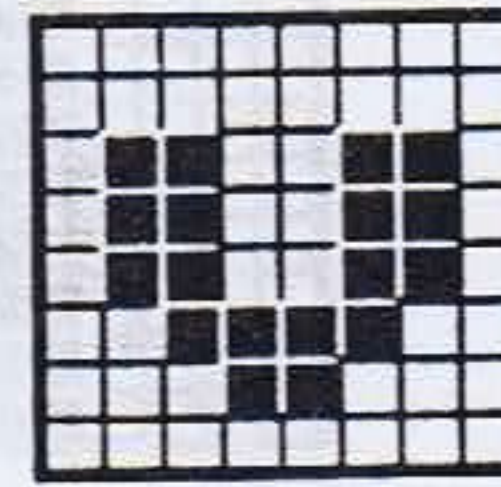
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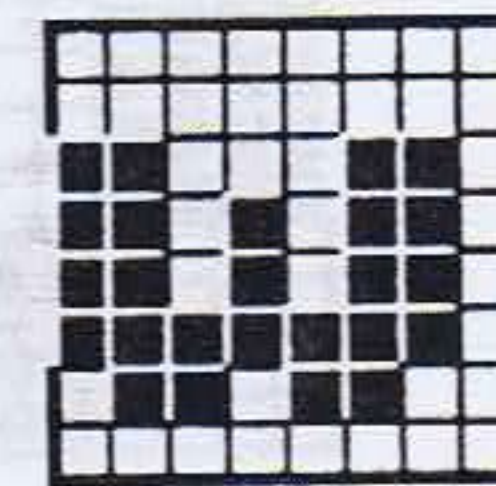
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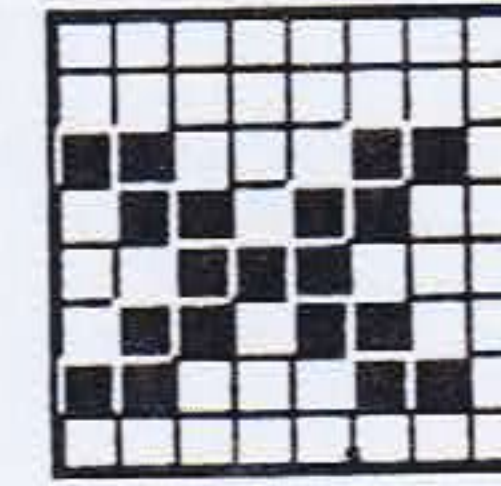
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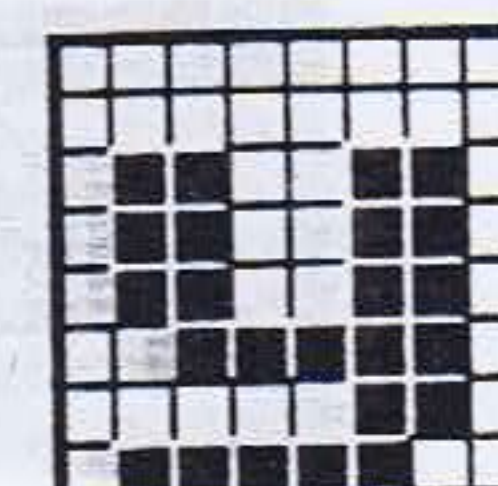
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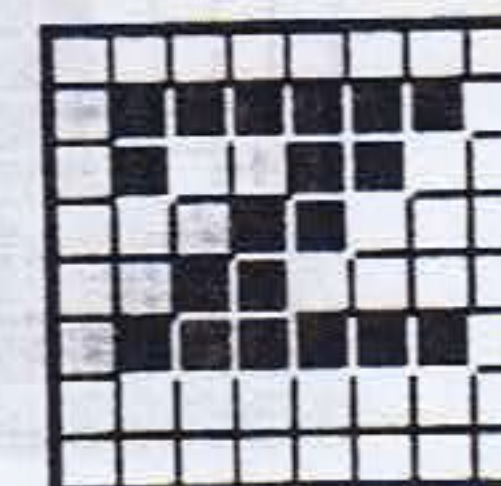
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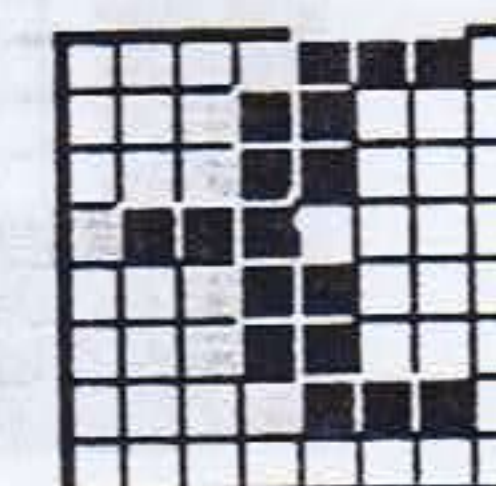
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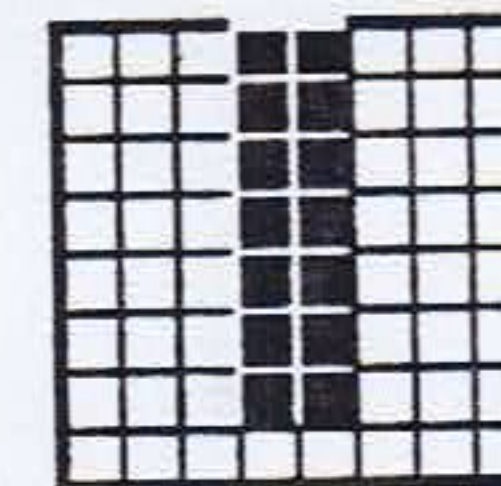
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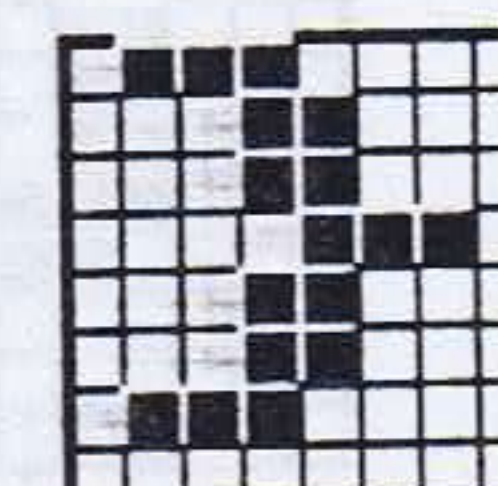
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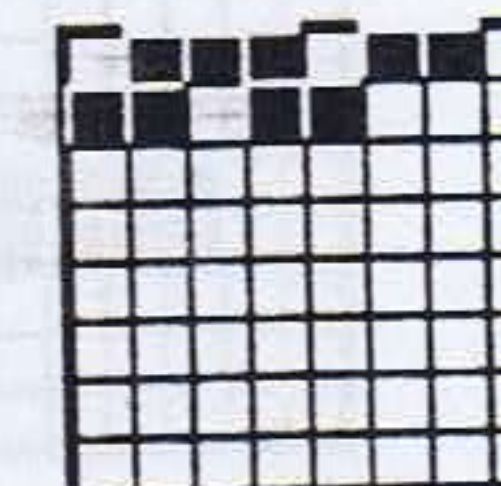
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124
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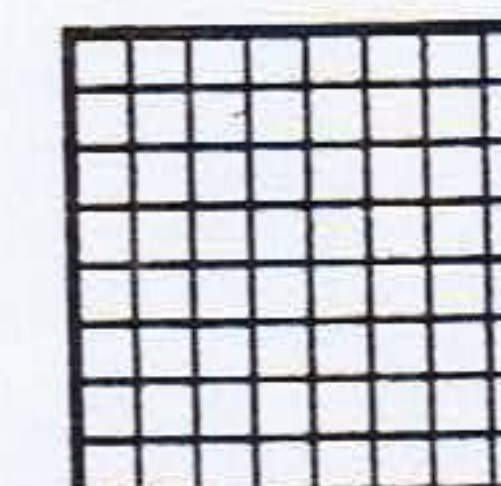
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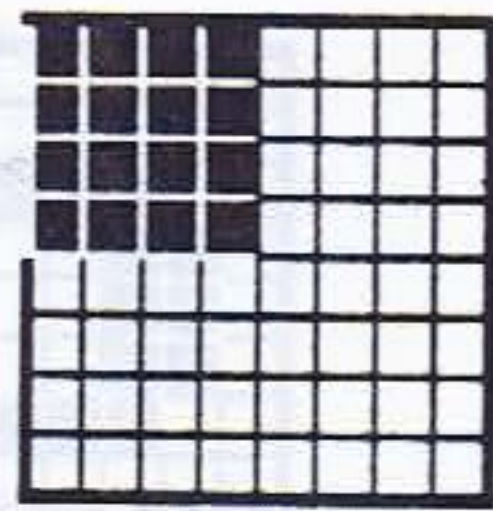
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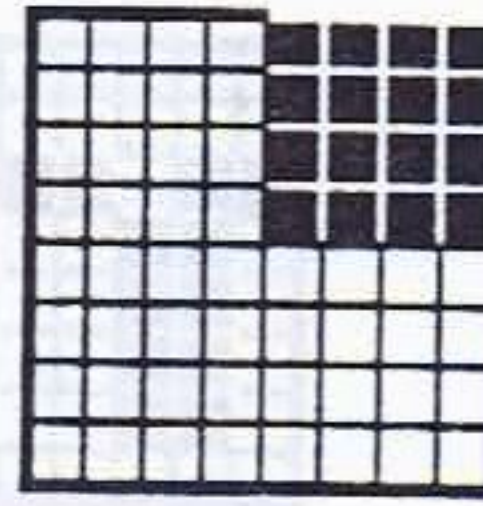
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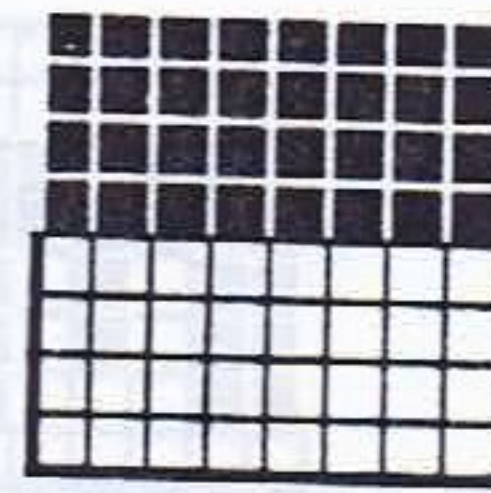
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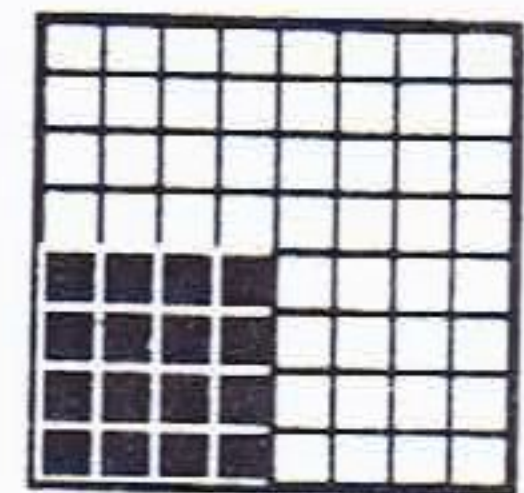
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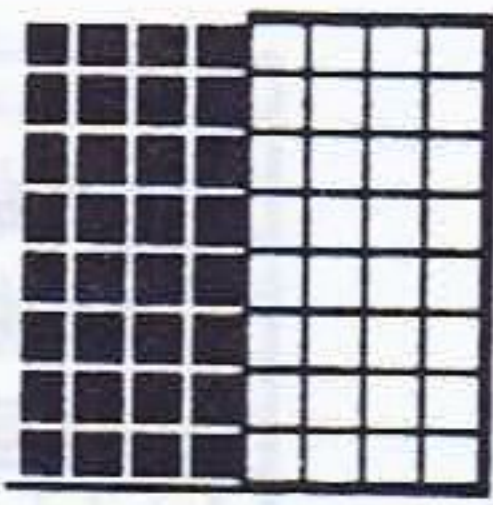
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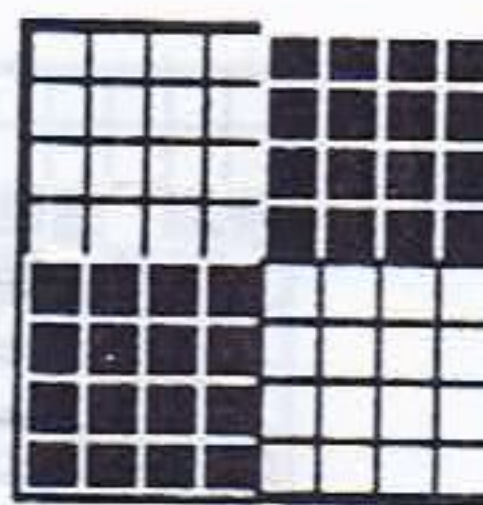
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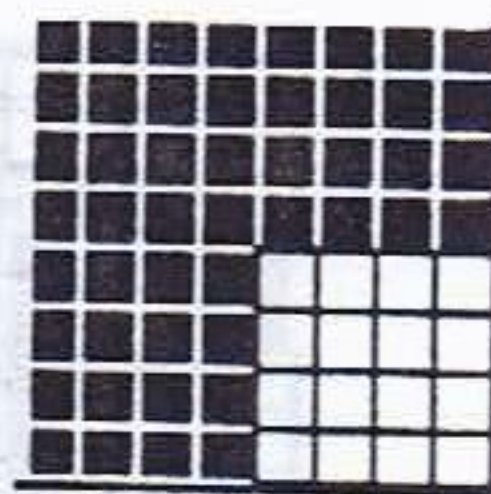
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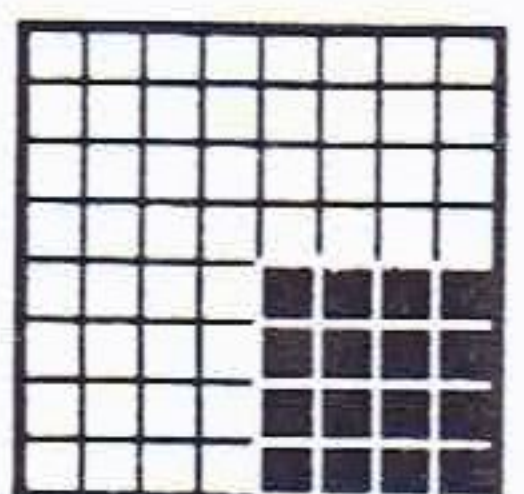
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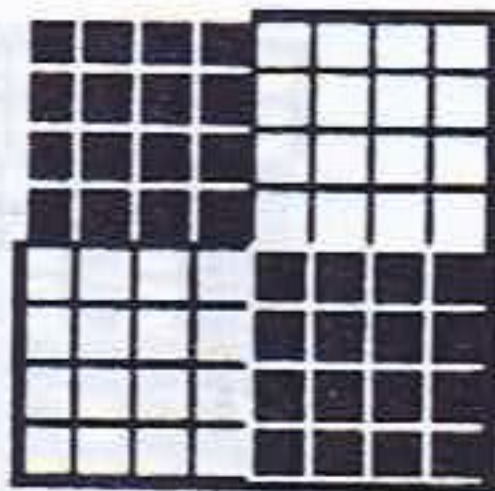
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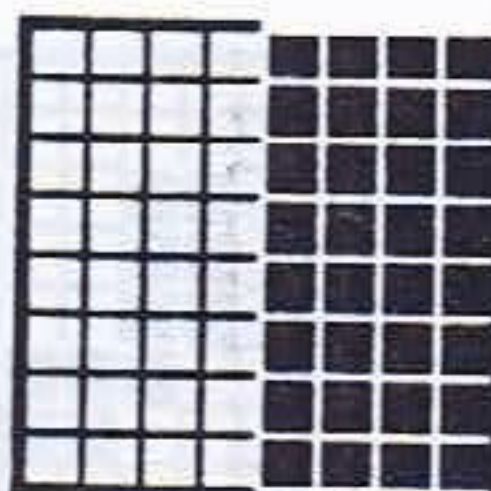
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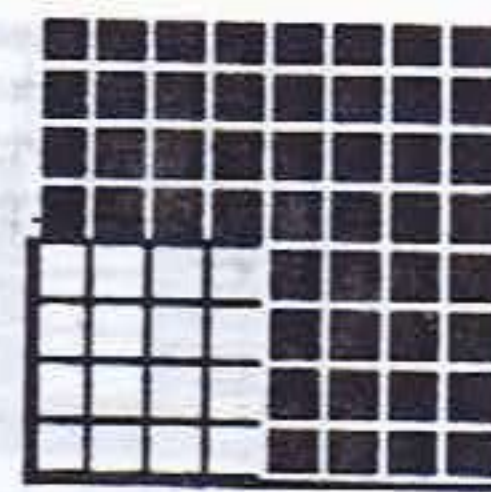
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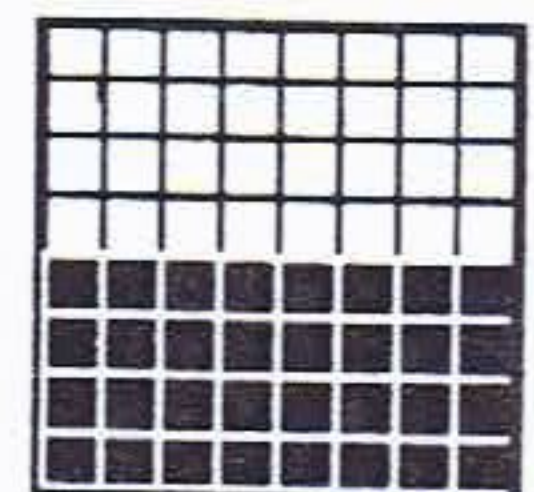
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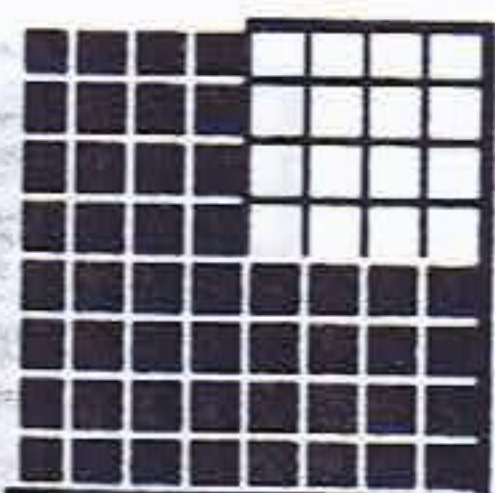
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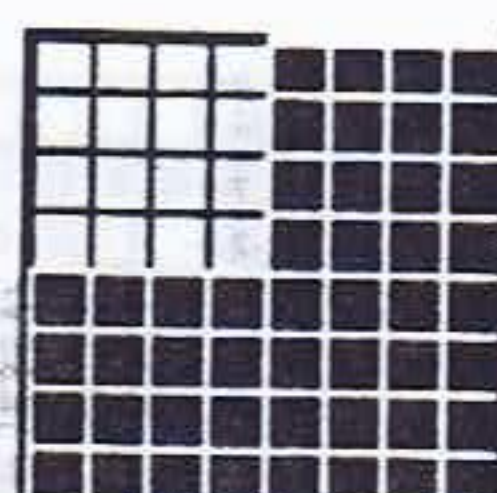
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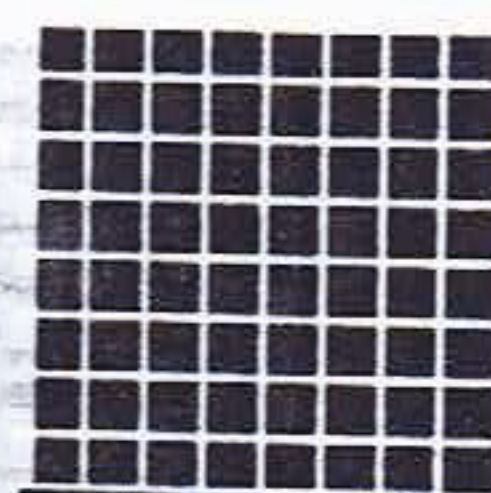
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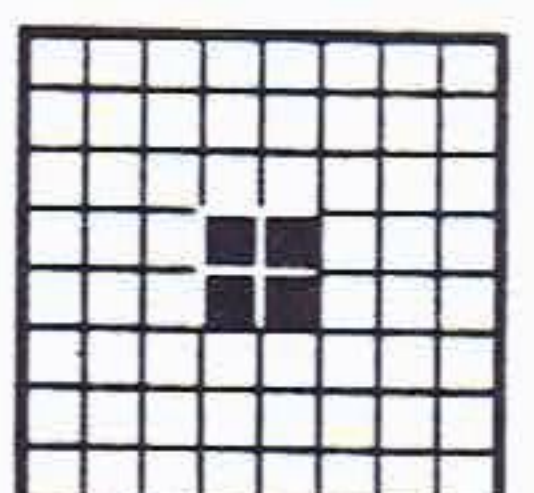
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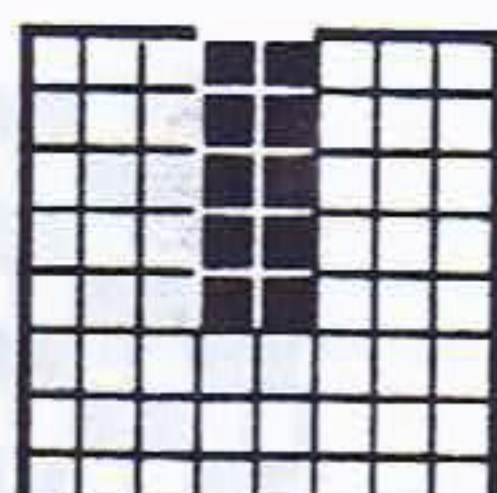
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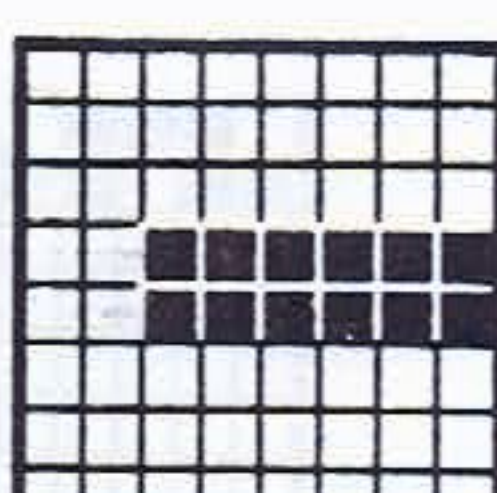
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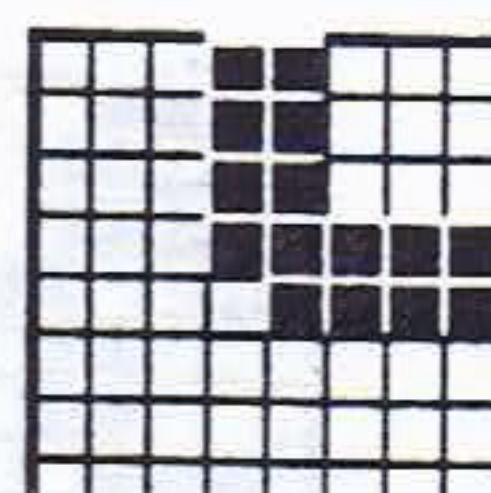
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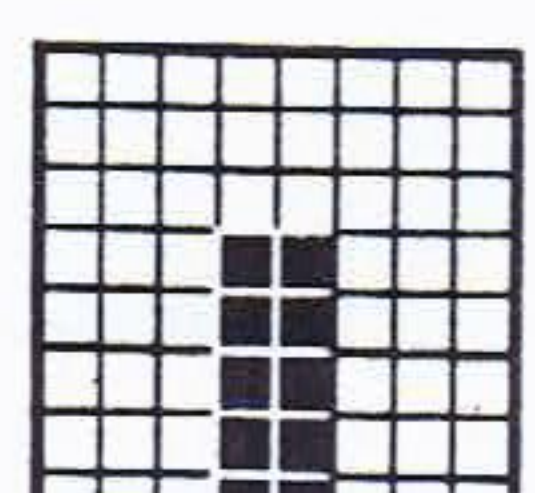
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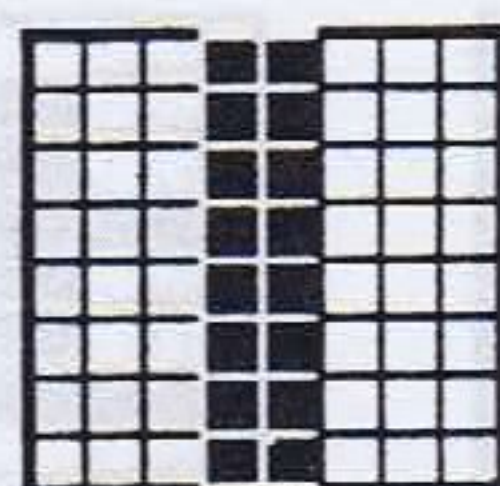
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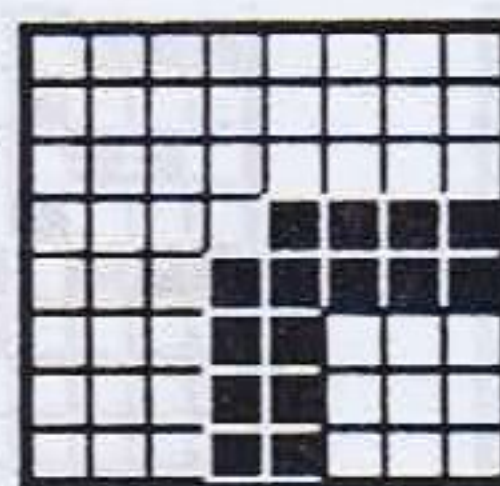
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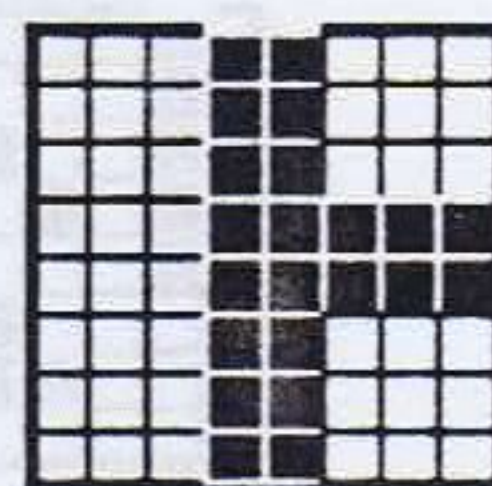
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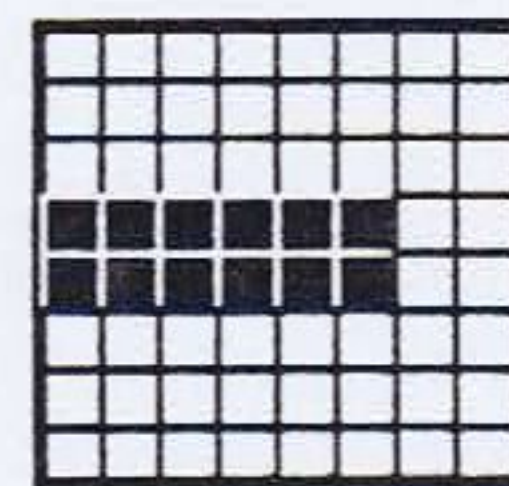
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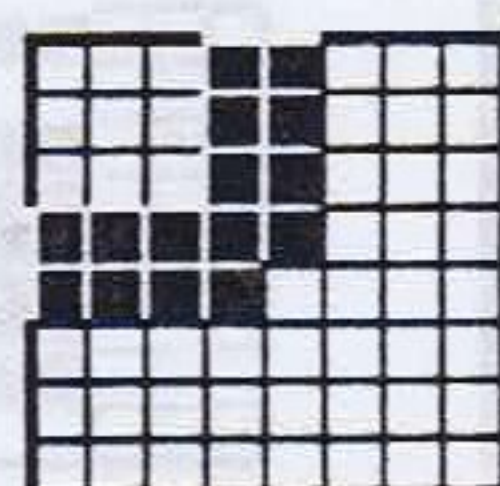
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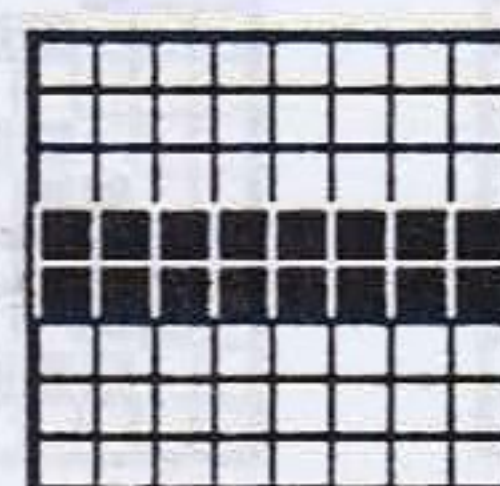
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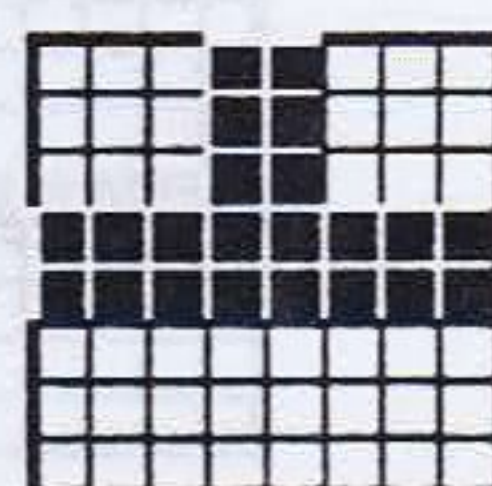
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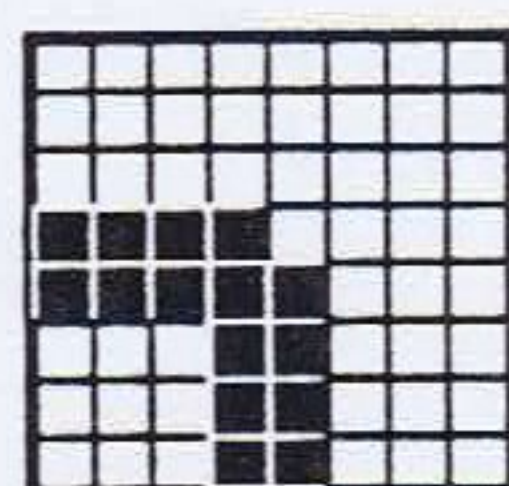
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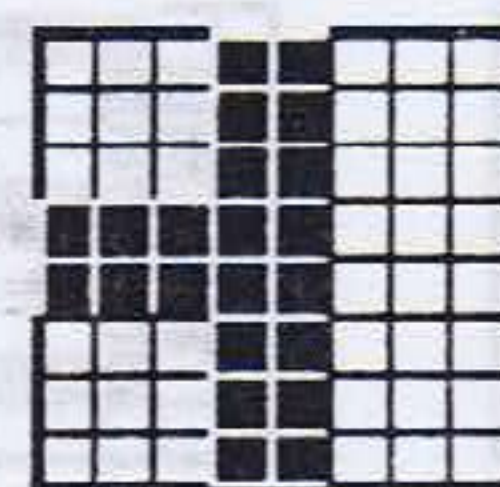
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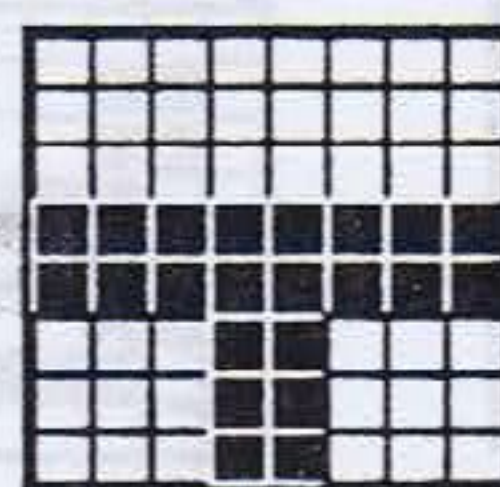
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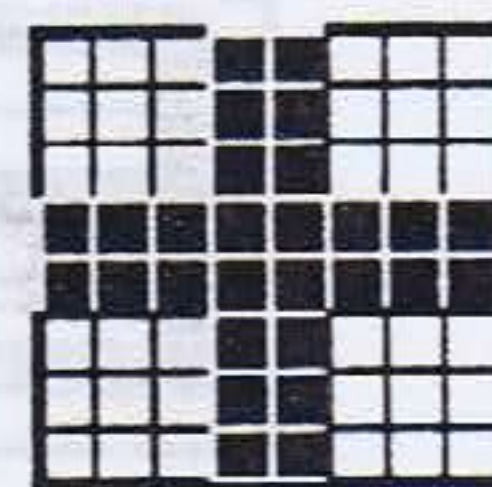
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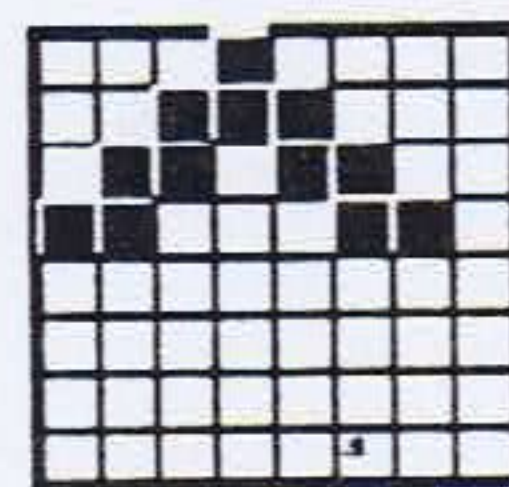
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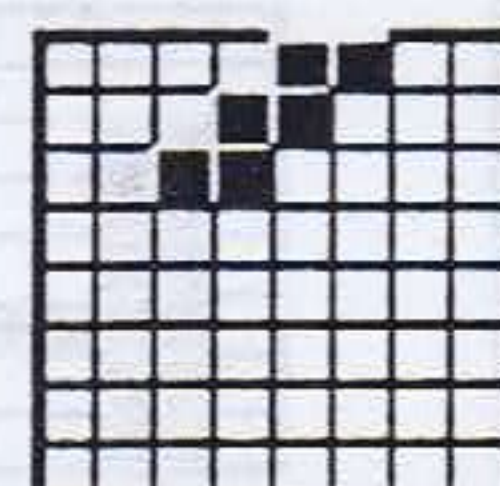
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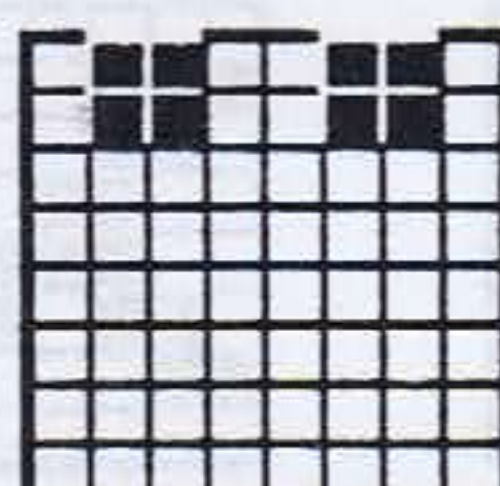
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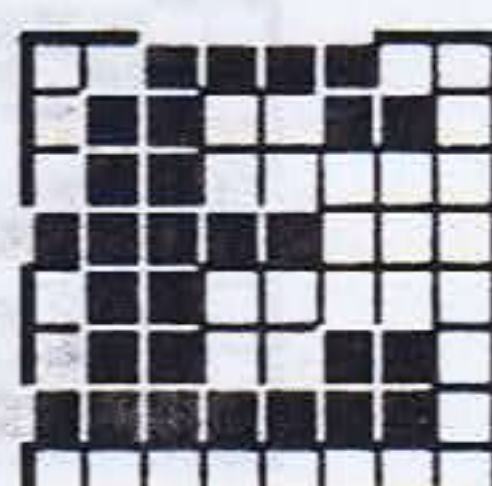
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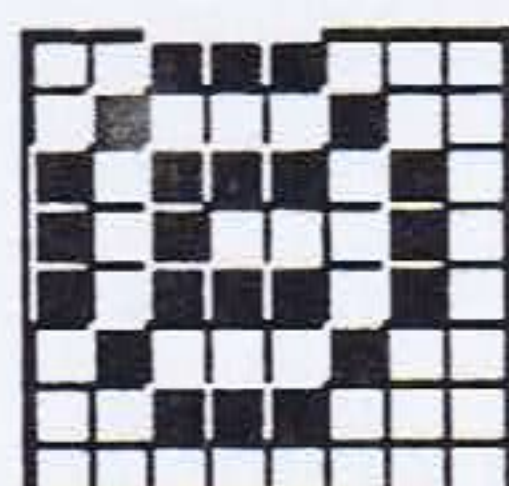
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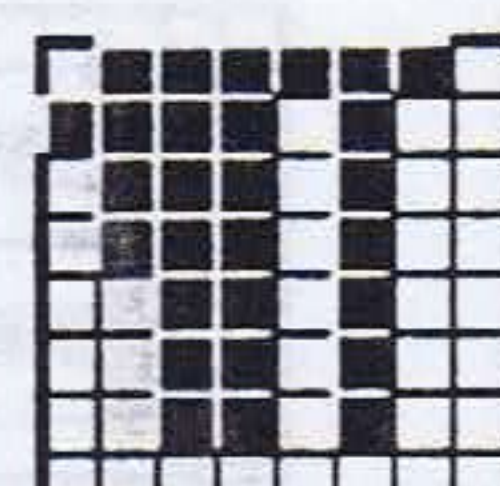
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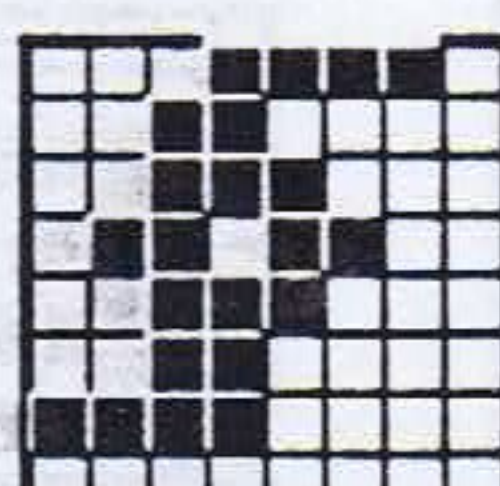
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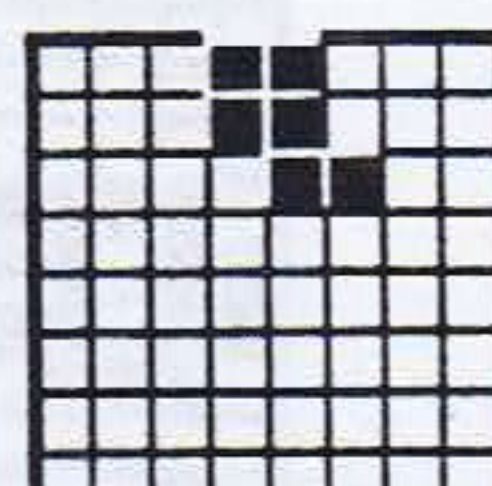
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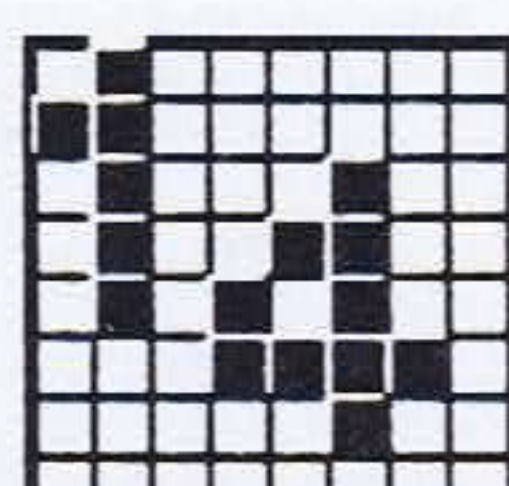
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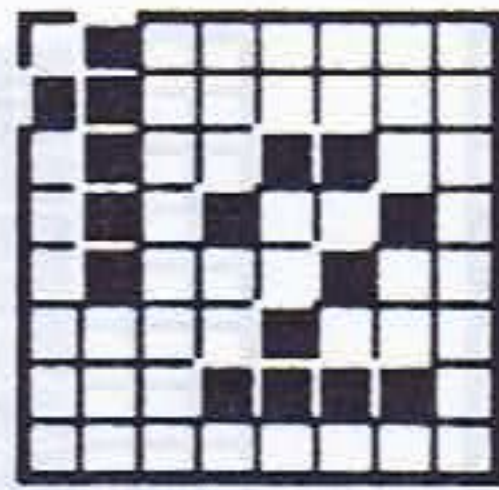
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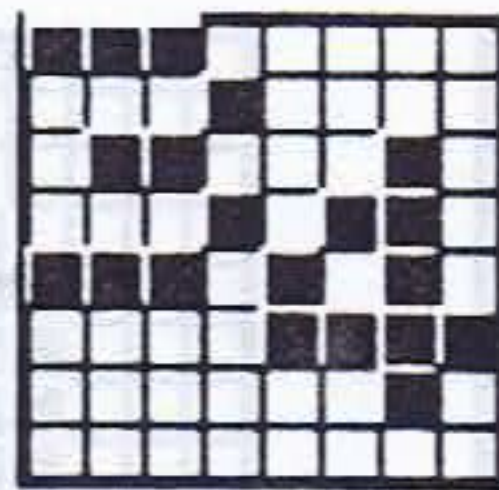
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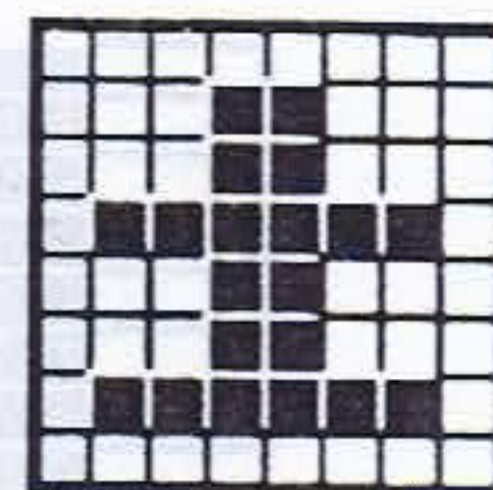
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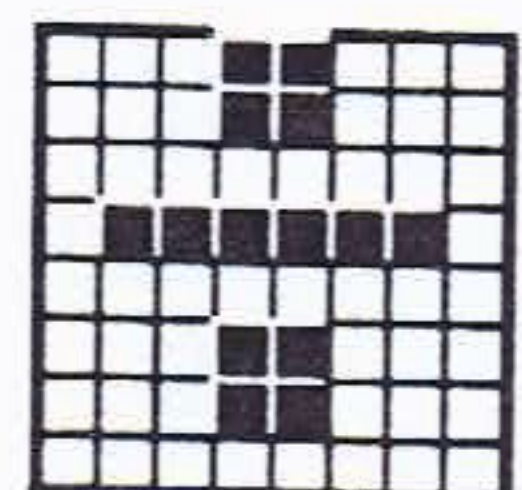
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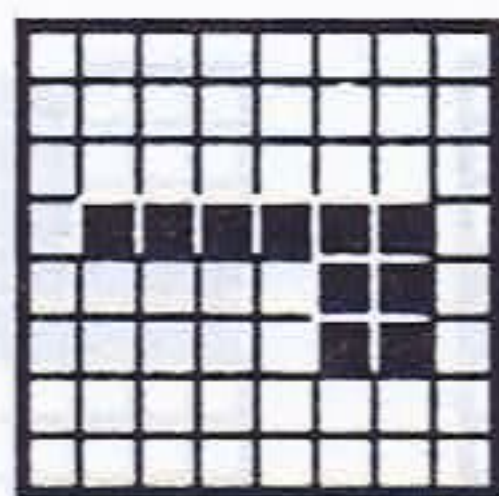
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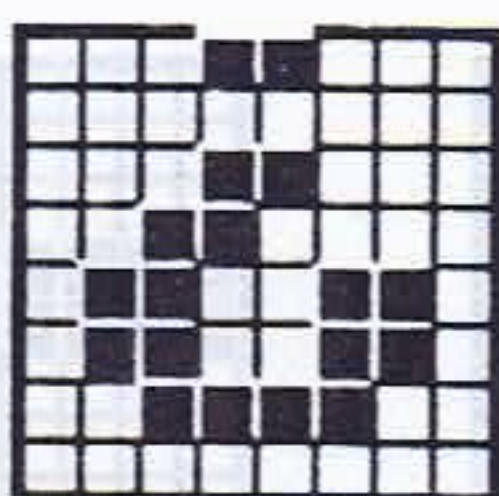
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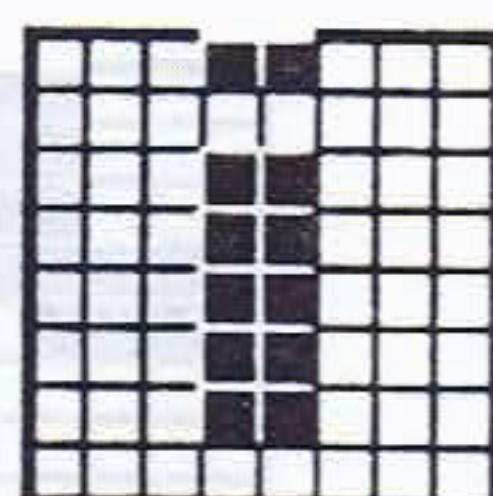
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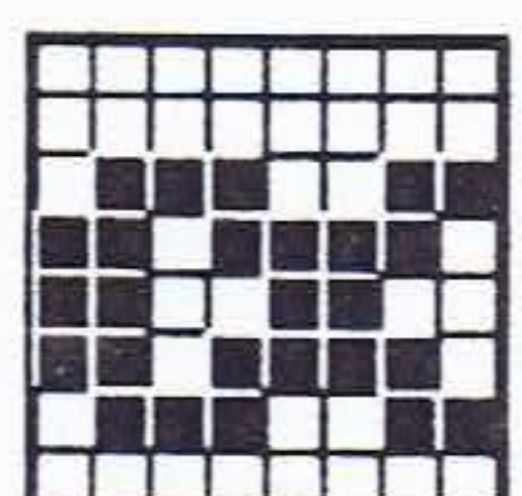
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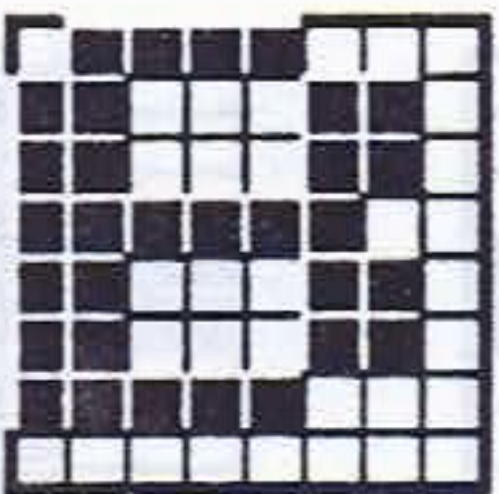
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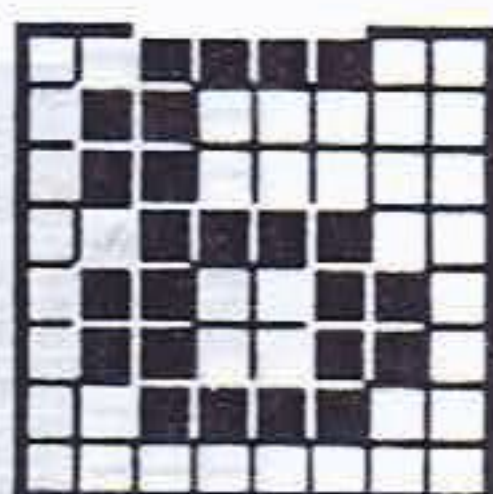
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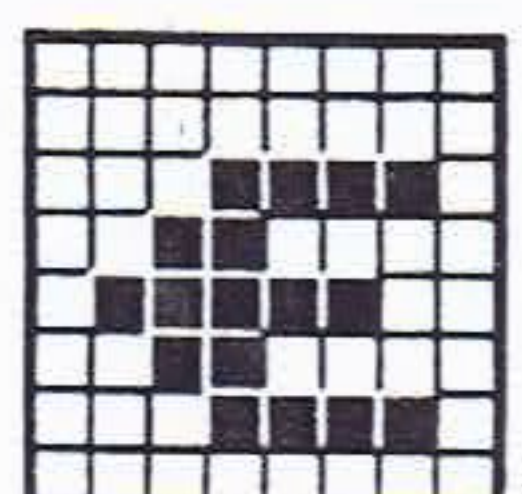
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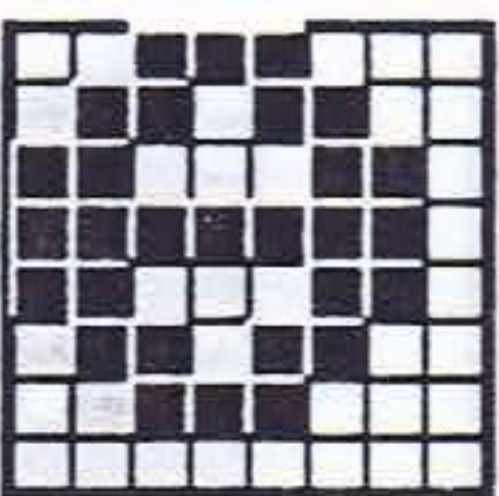
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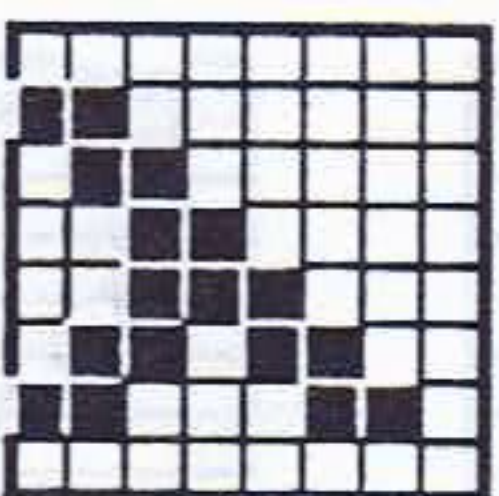
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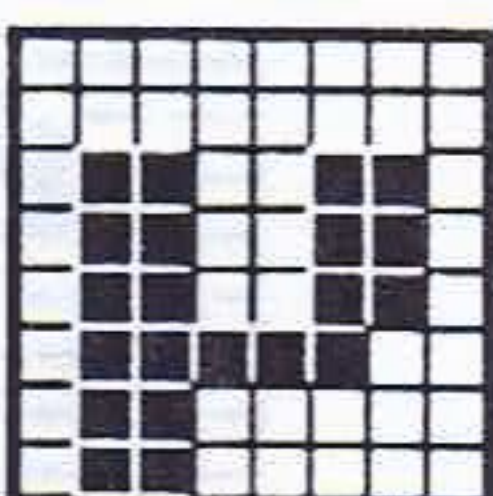
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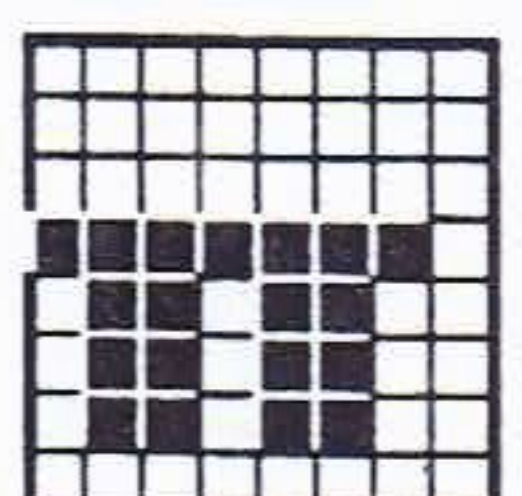
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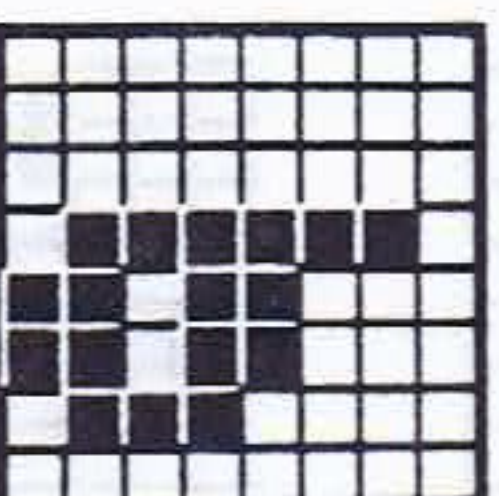
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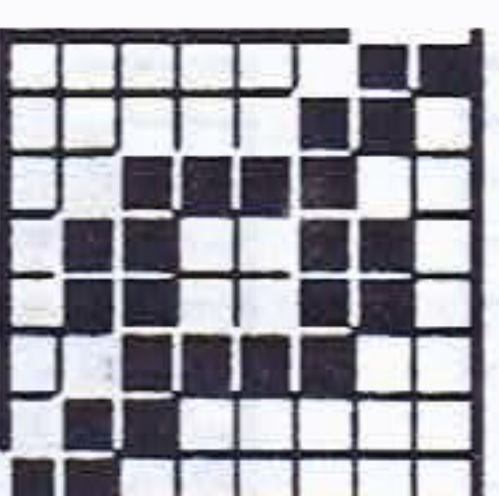
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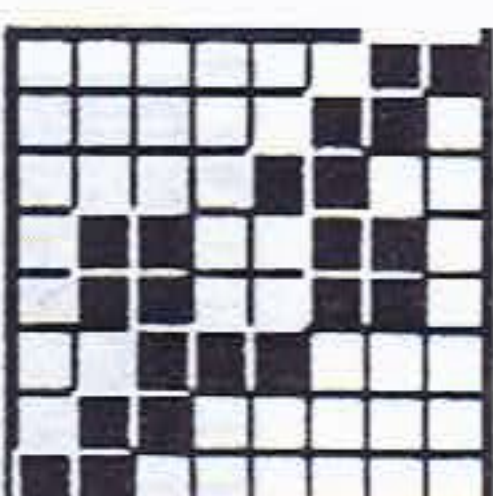
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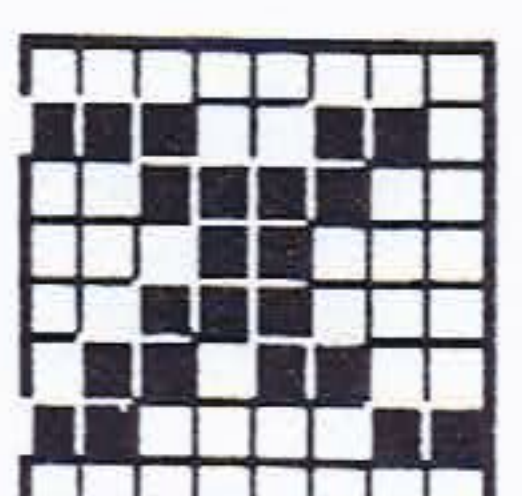
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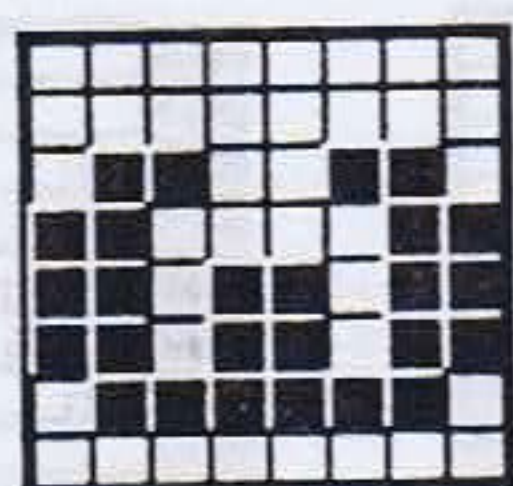
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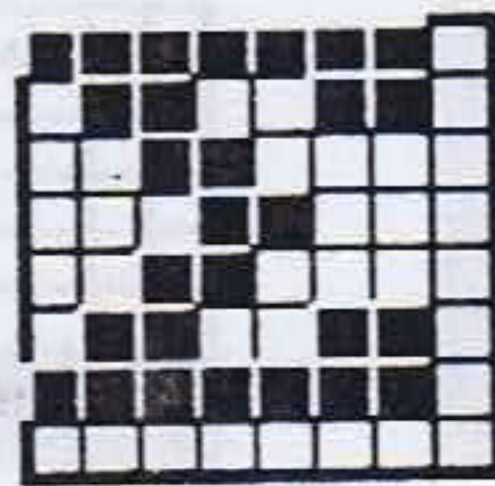
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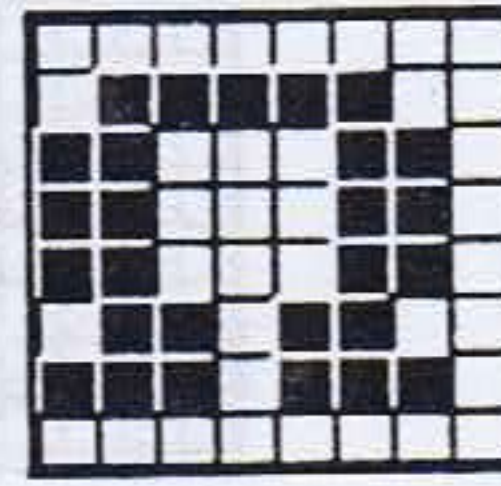
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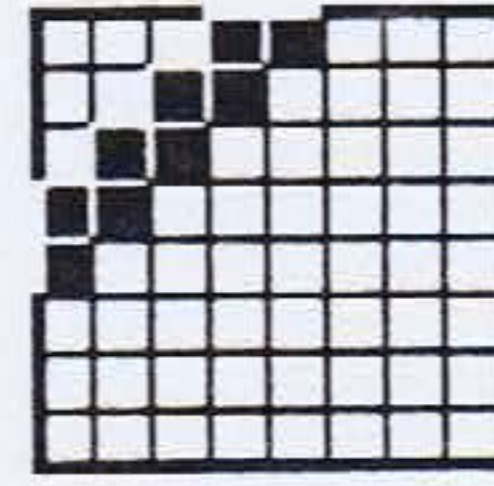
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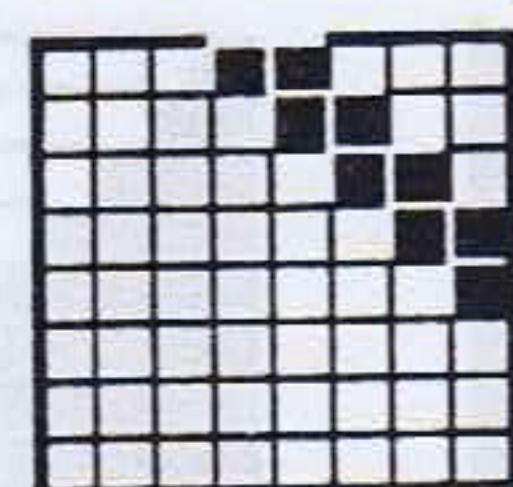
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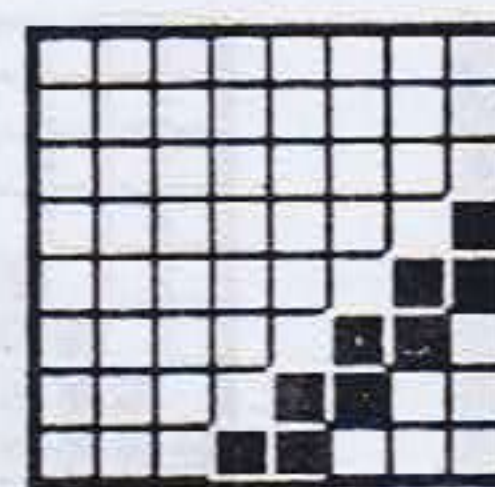
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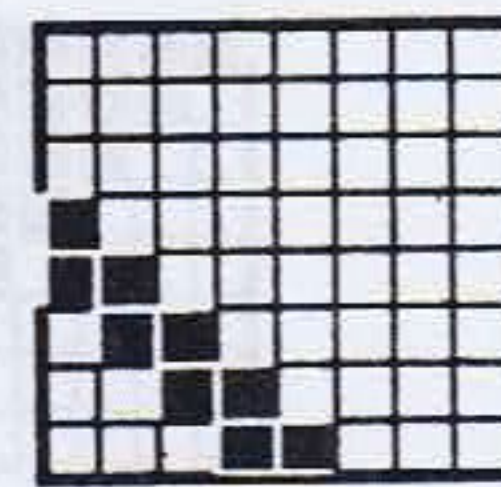
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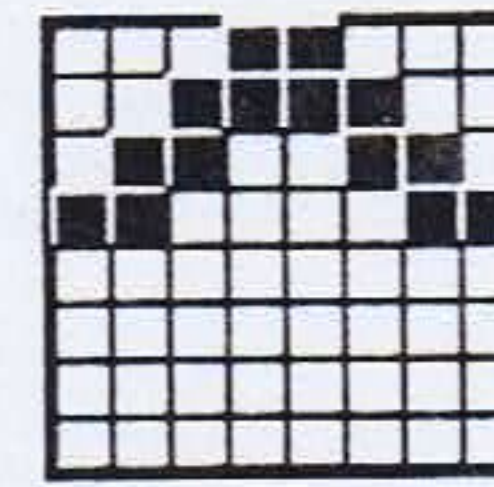
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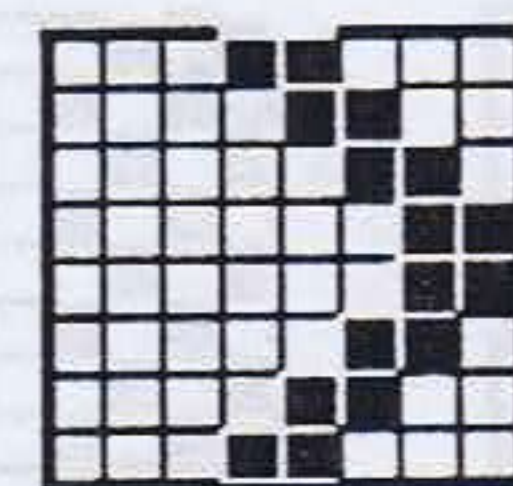
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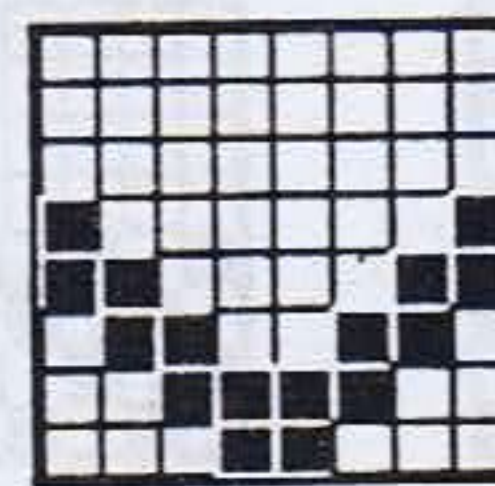
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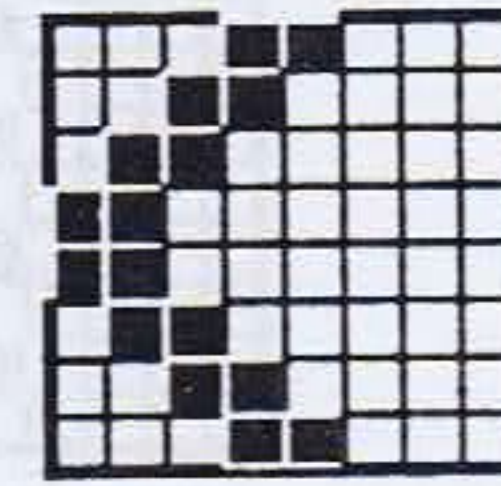
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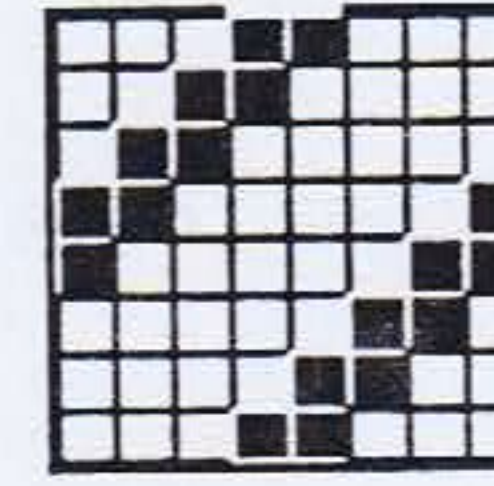
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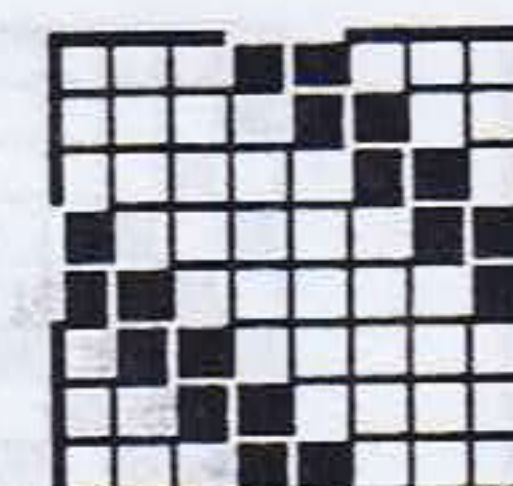
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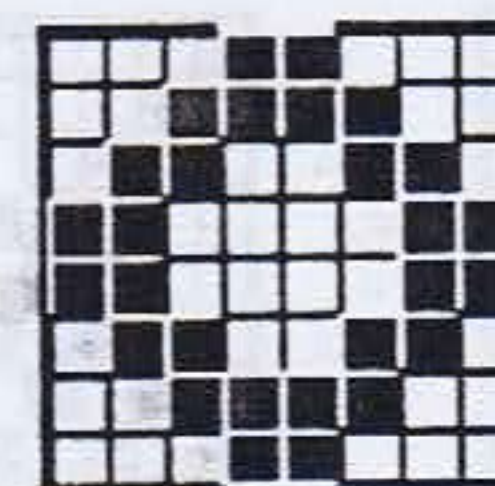
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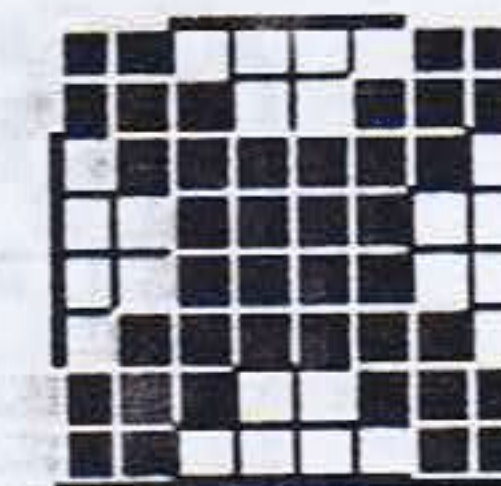
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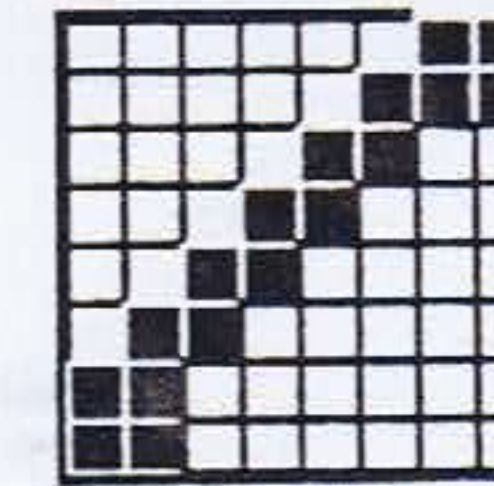
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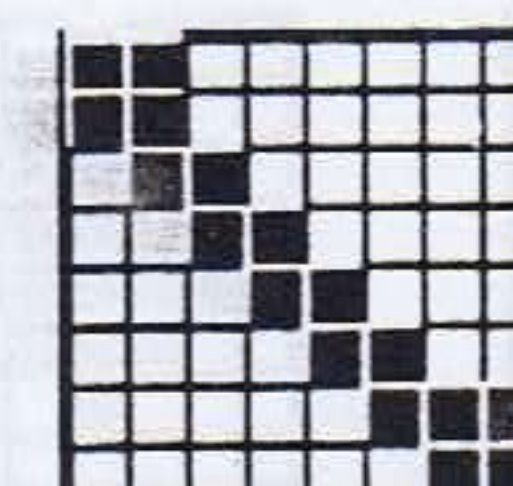
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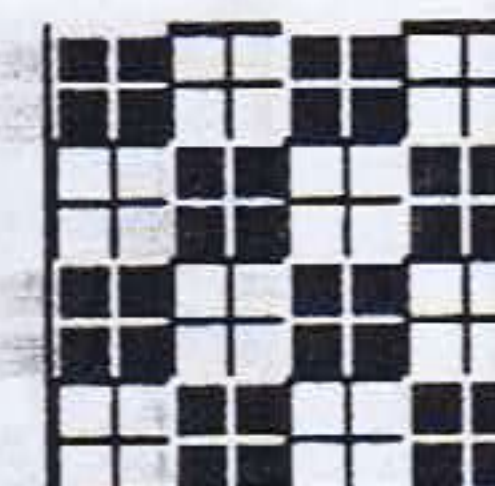
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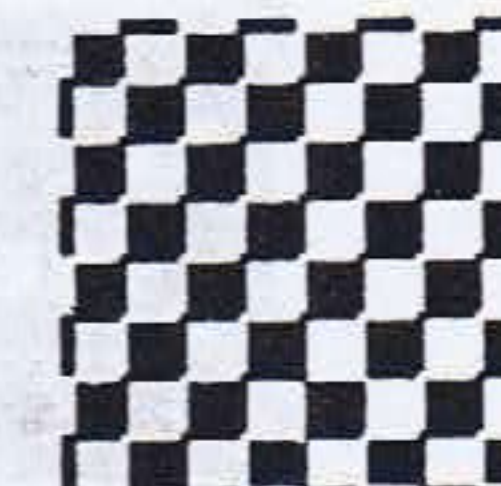
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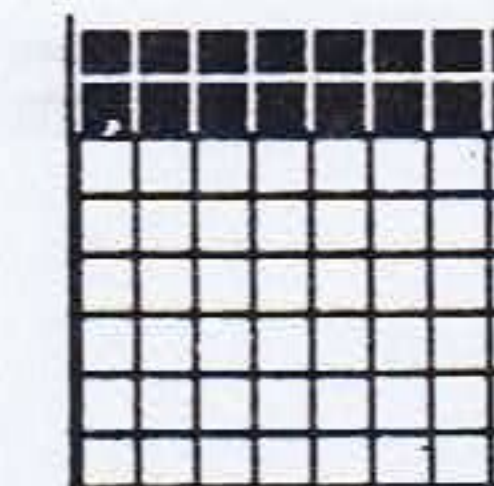
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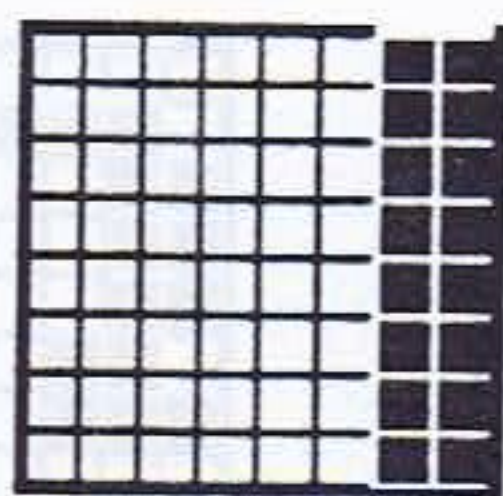
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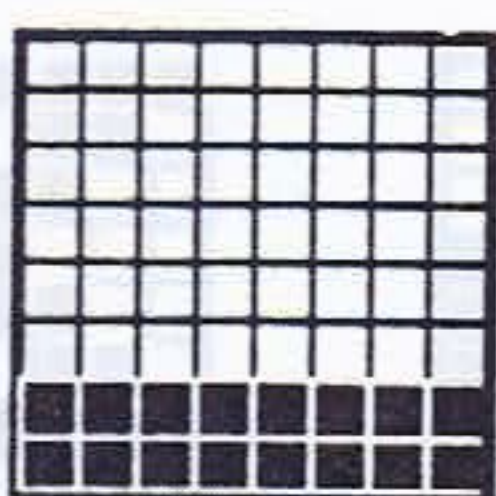
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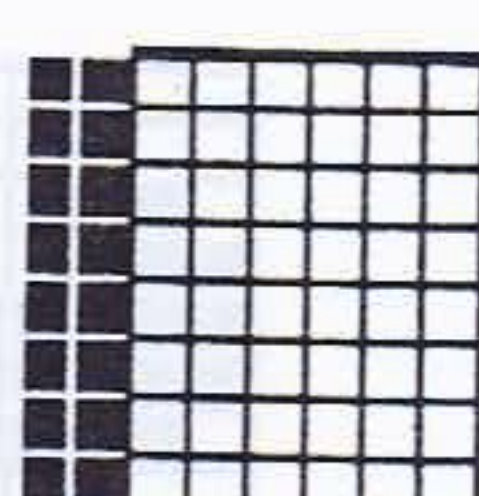
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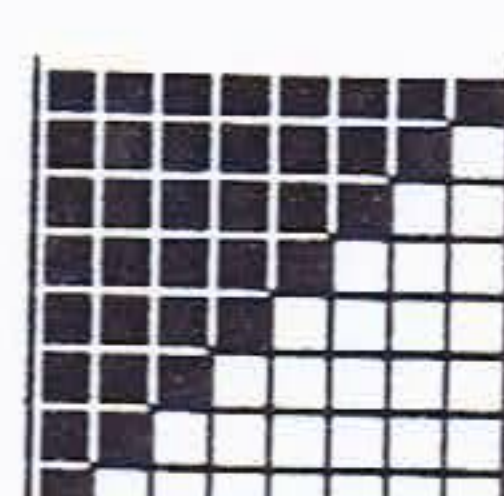
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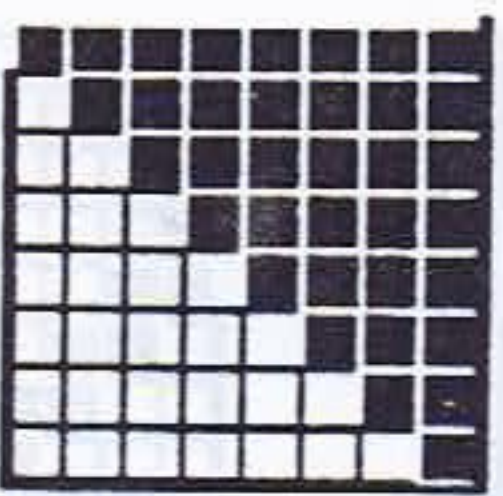
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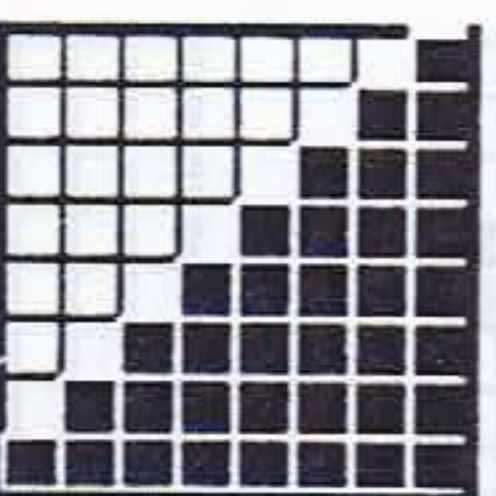
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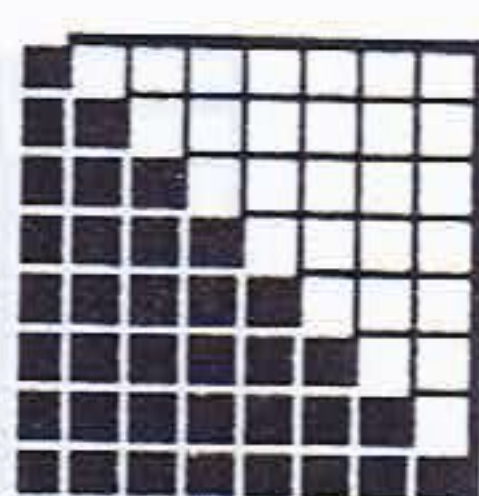
212
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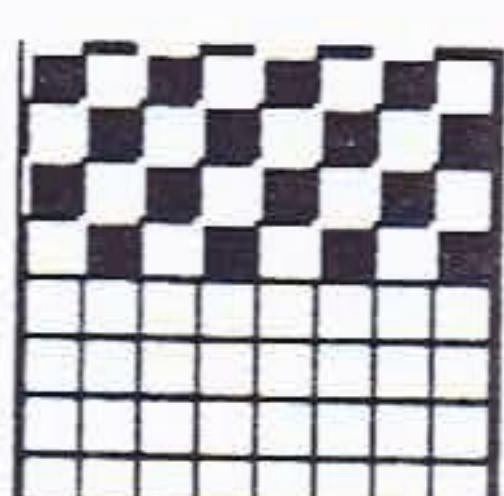
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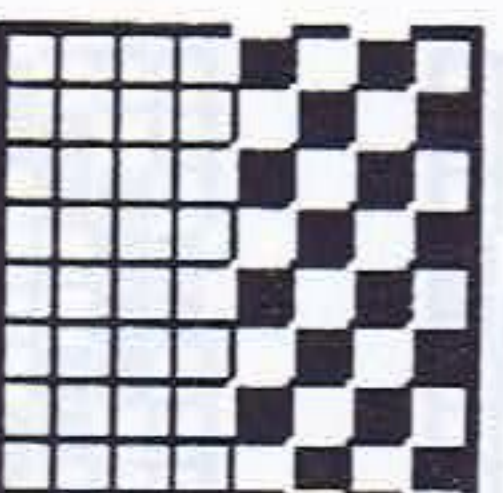
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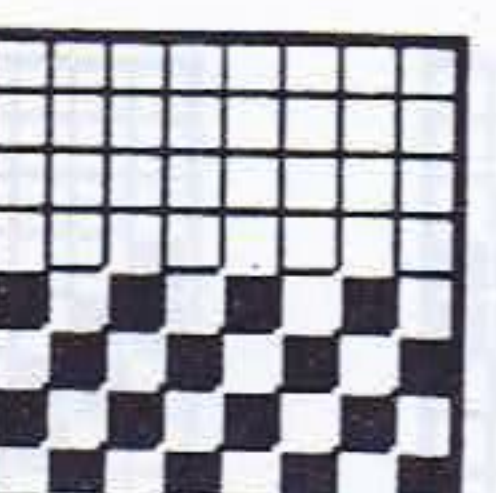
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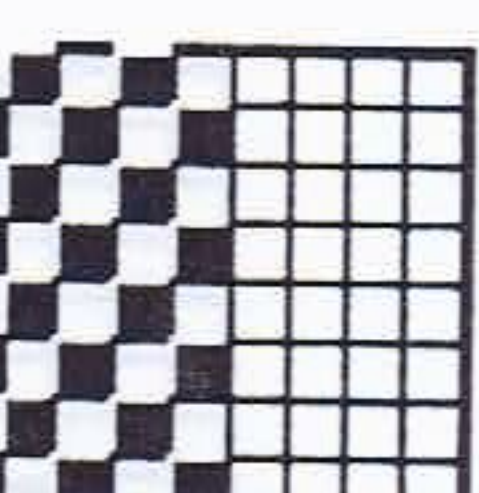
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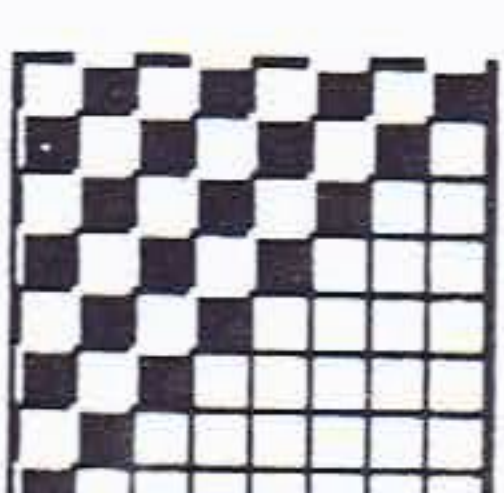
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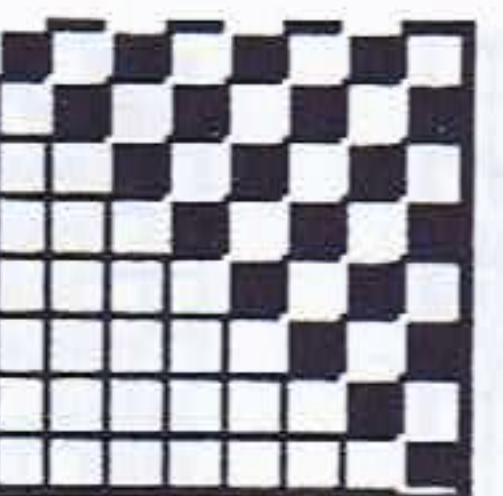
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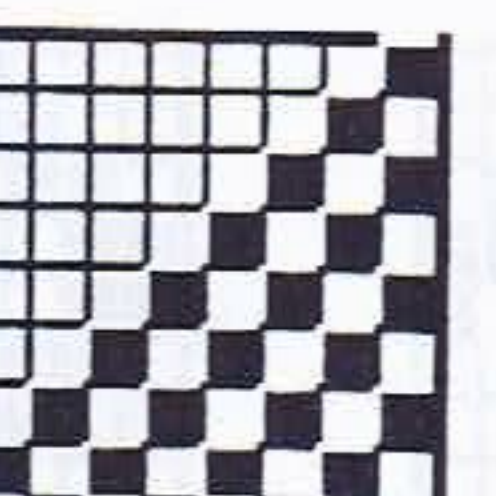
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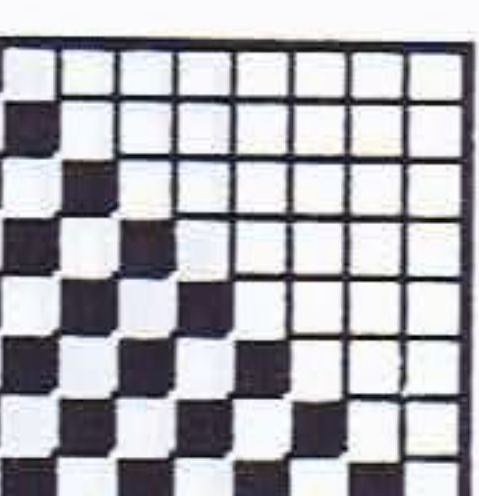
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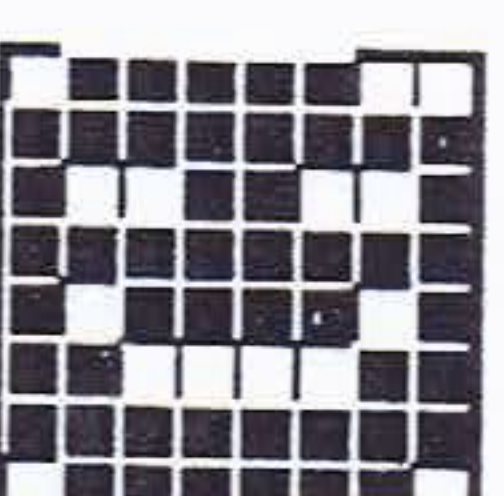
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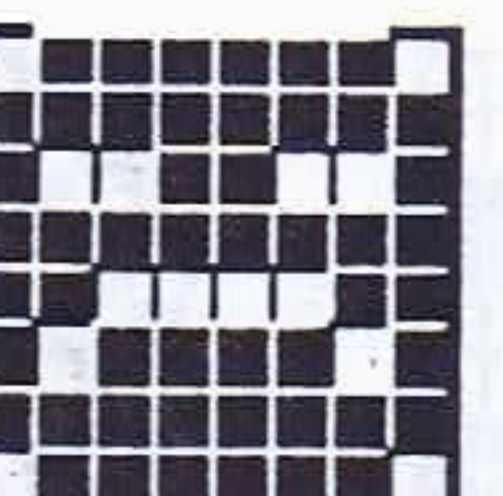
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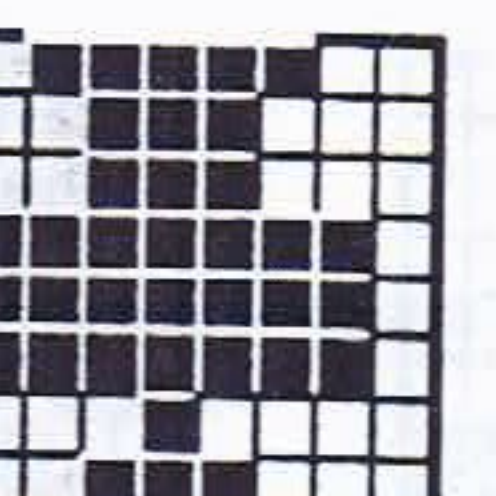
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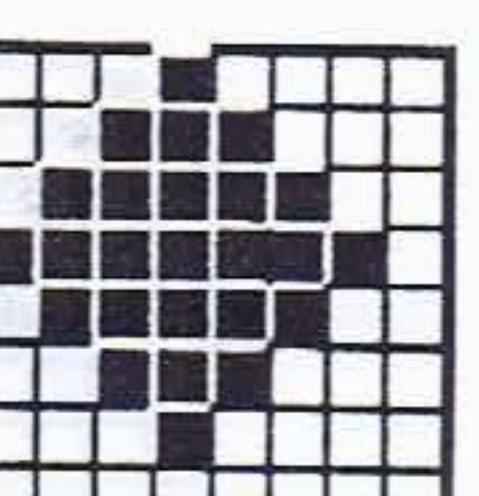
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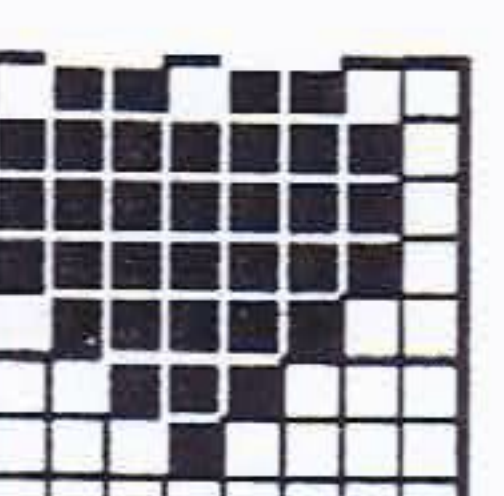
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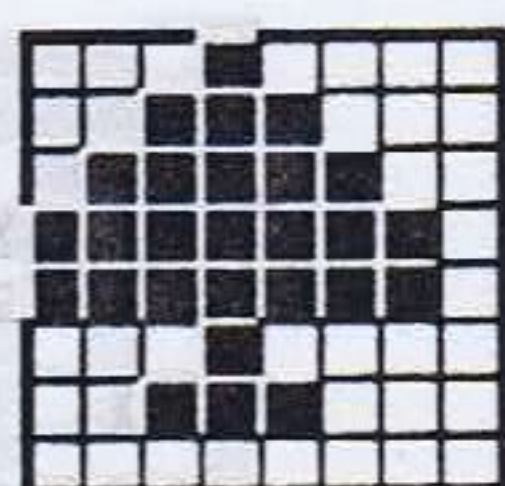
226
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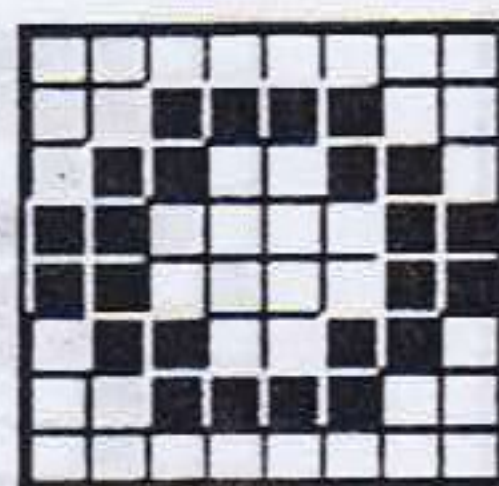
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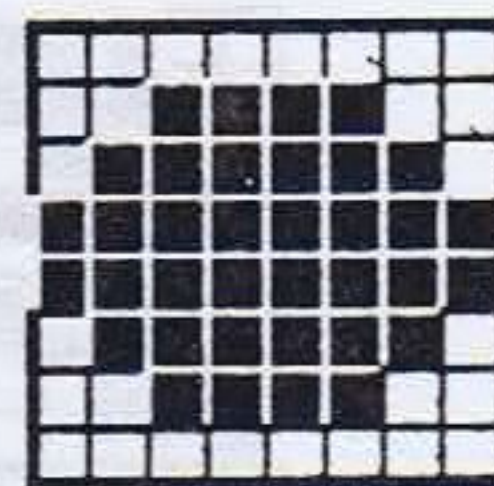
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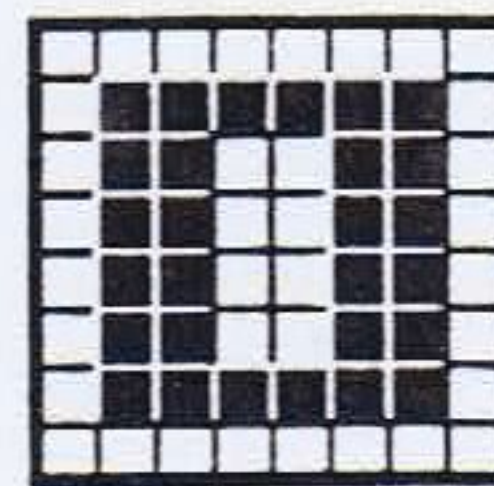
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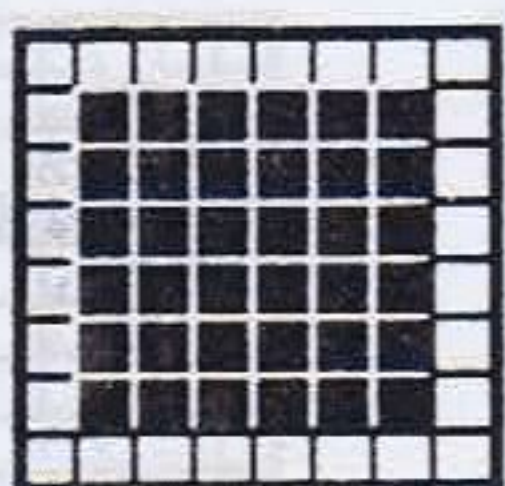
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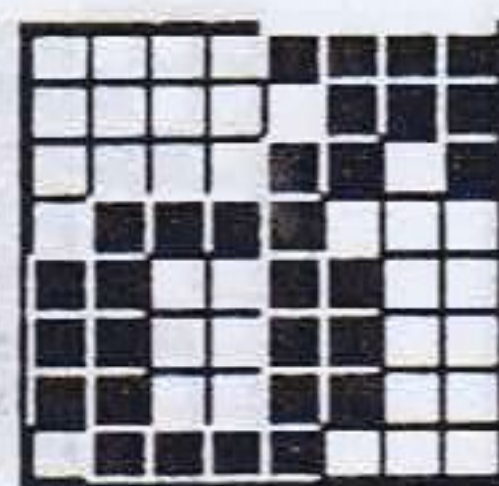
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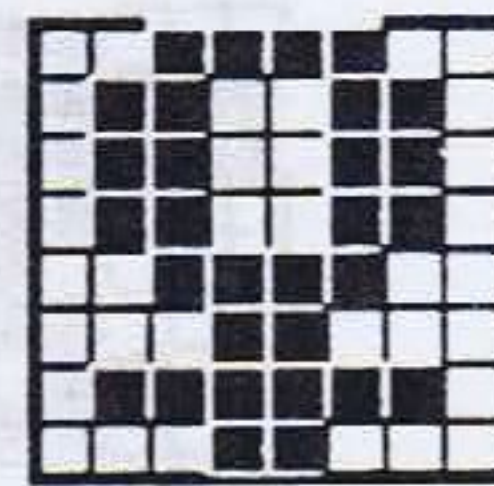
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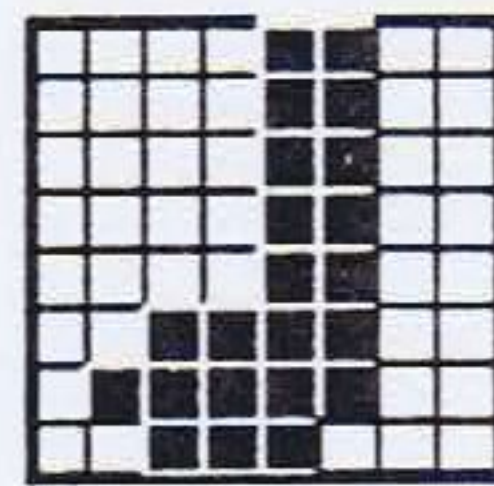
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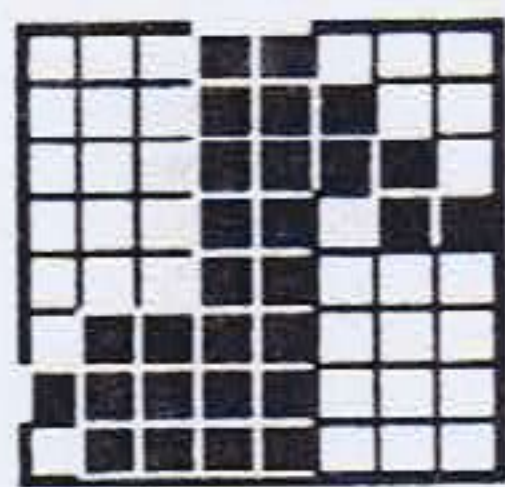
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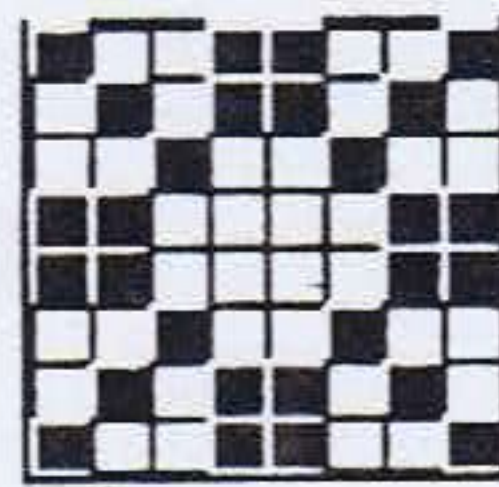
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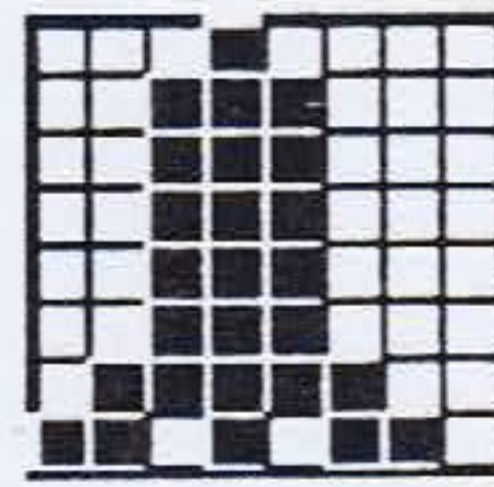
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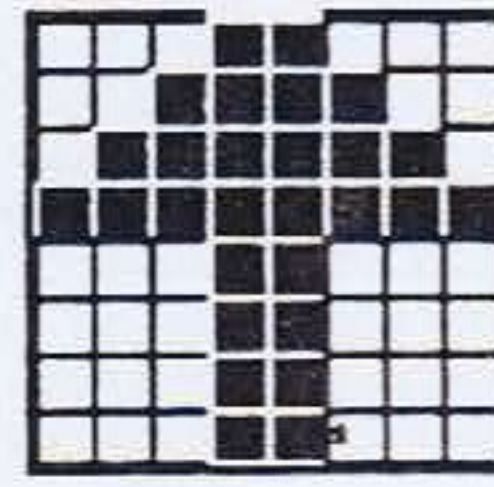
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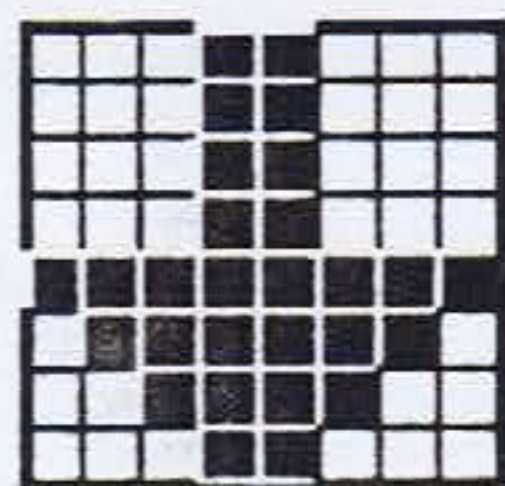
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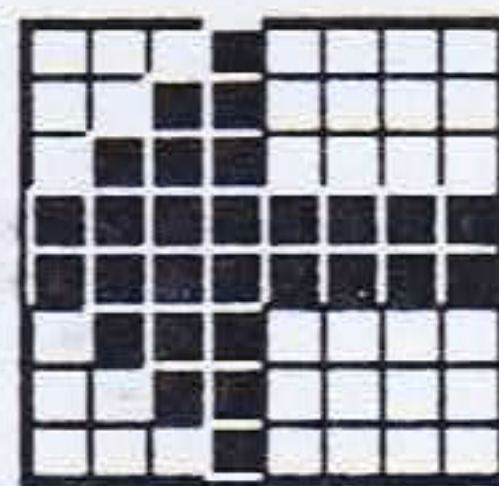
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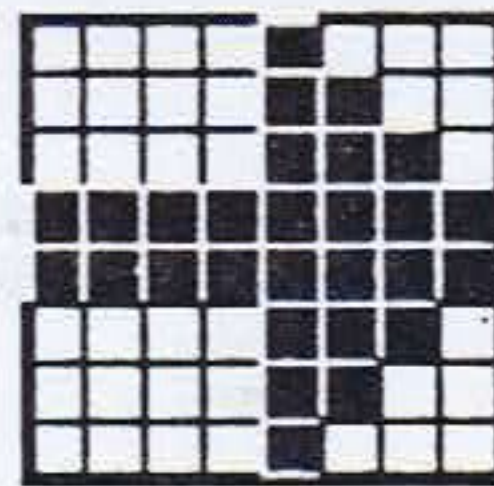
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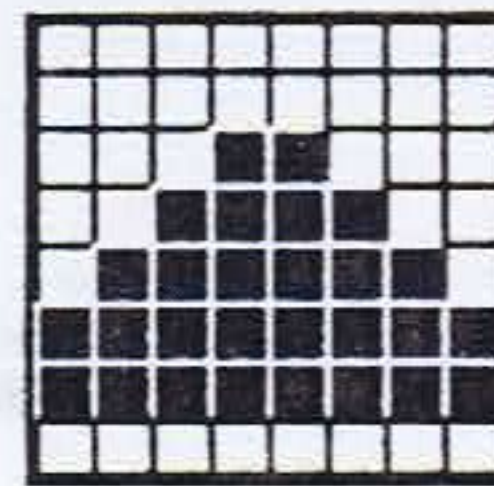
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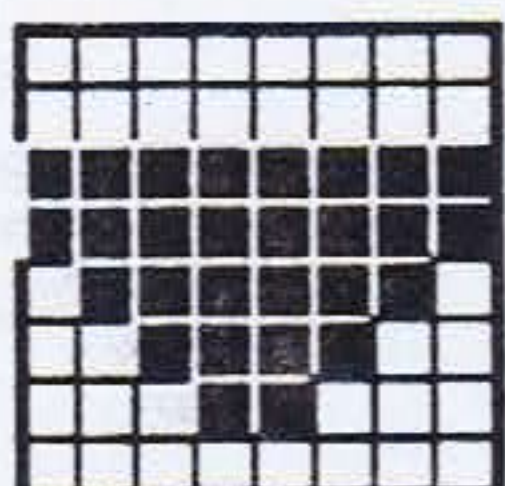
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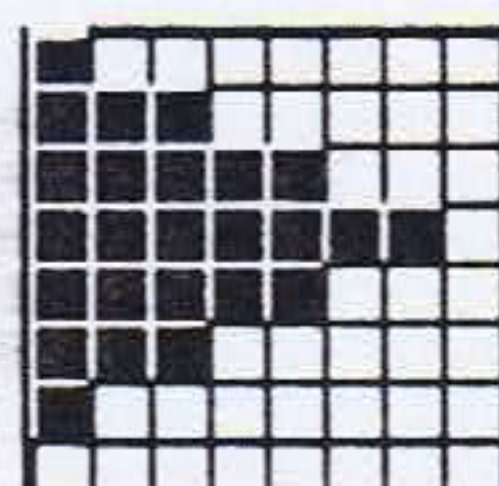
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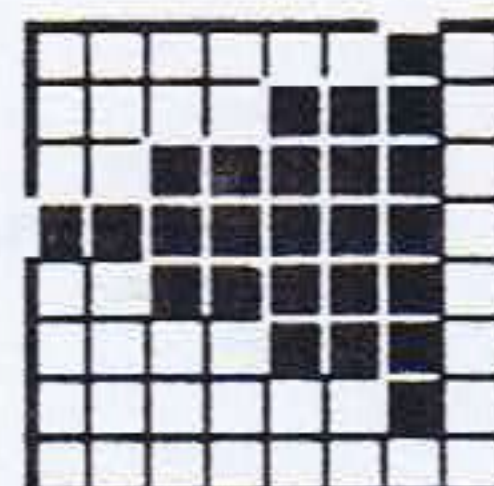
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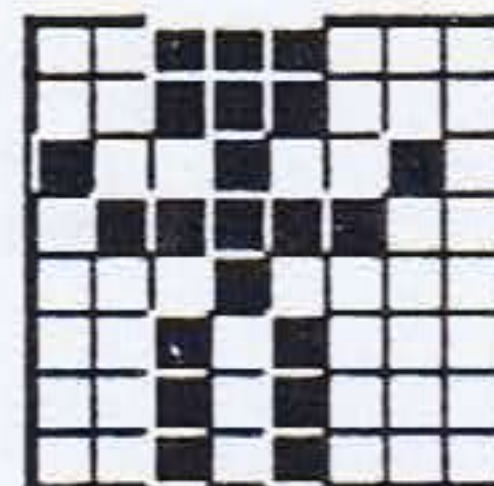
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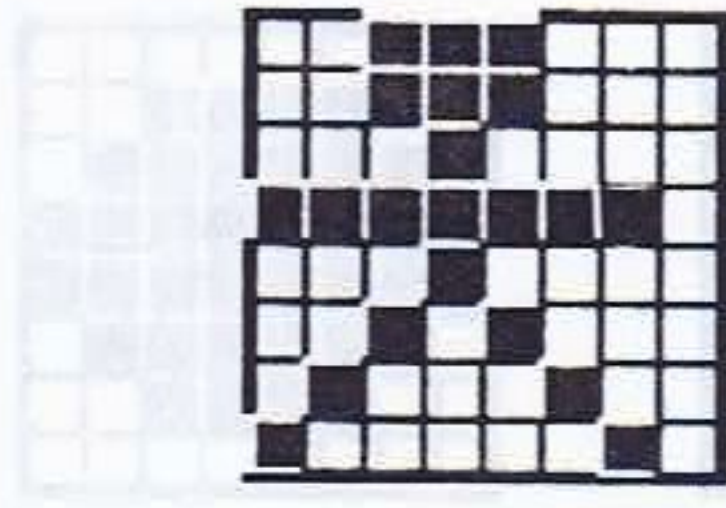
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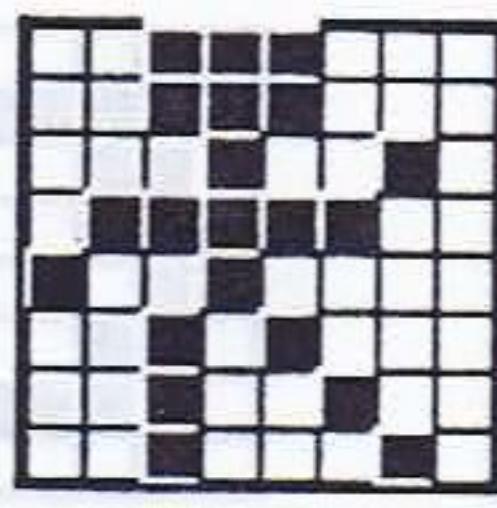
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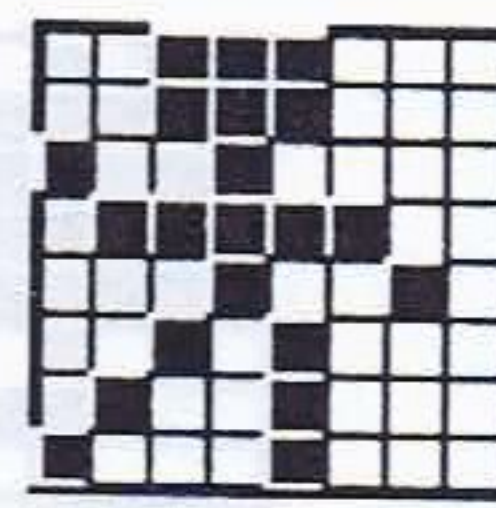
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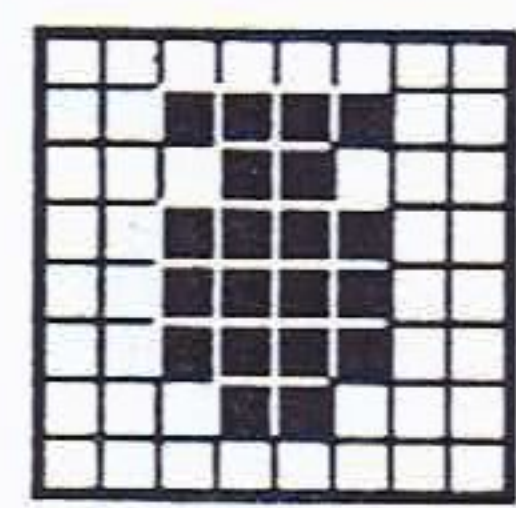
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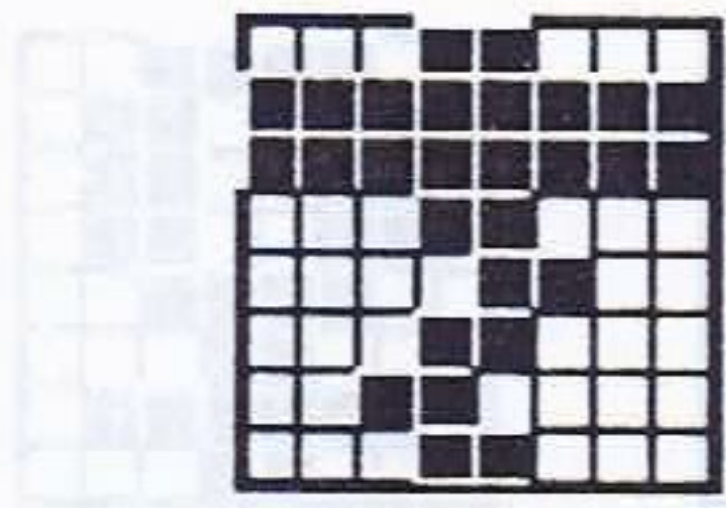
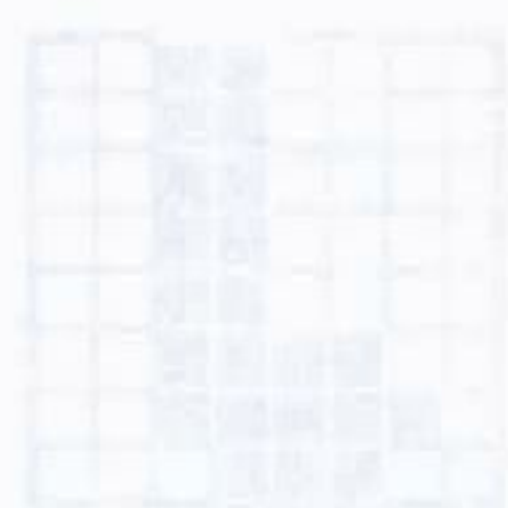
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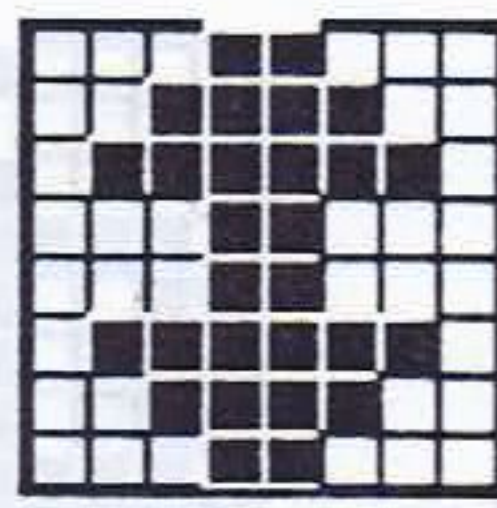
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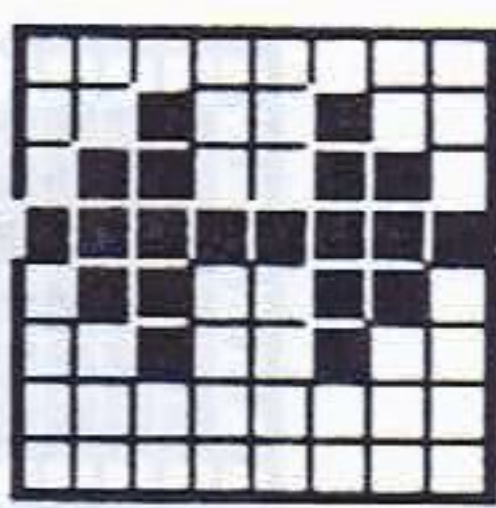
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