

Truth table

2) write T.T for a 4 bit
input

дiя

indicating when majority
of inputs are 1.

80/1

0

a

23

oo

1 0 6

4 ilps- a, *b*, c, d = 2% =

1 6

olp

22 21 2 0/p

b

cd

oo

F

F

o

(0-15)

The 20
D

Folse = 0

20

o

310

410

510

1

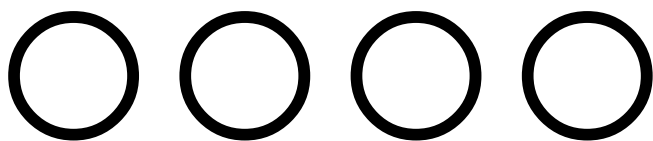
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13

14/1

15/1

1

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1 0

0 1

3

a slm which

3) Develop a $T \cdot T$

for

accepts ter 2-kit kinary nos.

and generates three

opps. The

first olp indicates when
the 2 nos. differ by 2

2nd

2

or more,
,

olp indicates when the
two nos. are identical y the
third opp indicates when me
first wo

exceeds the 2nd

no.

Nz

Solon. ; *ilgs*

: - 4

opps → 3 =

x, y,

I

n

↓
□ | 32

a

}

$$\sim 1 = n_2$$

$$cd=24=16$$

(0-1
5)

ny072

и

a

2

3

4

6

7

8

9

1

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12

مرا

124

15

Ω

0

иЗ

72

(^{*}=v) (14_1x1)

c

0 ٧

$$x \ y \ z \ (x^2)$$

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1

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a

a

3

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*

Boolean expressions
from $t.T$

canonical)
minterm form

ナナ

Canonical
madden
Jor

yo sop(sumi

xx Eg

$f(a,b,c)=$

sop (sum of products)

* pos (product of

$a b c + \bar{a} b c + \bar{a} b \bar{c} + a \bar{b} c + a \bar{b} \bar{c} + a b \bar{c}$

a

oo

6 # terms
notations

Ъ

sum)

Eq: $f(a, b,$

c)=

(a+b+c)

(a+b+é)

a b f/tems

Mo

1a76 Mo нaтb

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01 à 5

aб

тo

11ã b

m

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од

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d.

a b

atm2

M2

2

0

o1atb |

M2

12

3

0

a blm 3

3

3

1a+b M3

* E-notation is used * JT-nodation

is

to simplify writing used to

simplify

no

notationis.

$$+ (a, b) = \{(1, 2)\}$$

writing

notation,

$$+(a, b) = \pi T(1, 2)$$

$$f(@b) = \acute{a}bt$$

ab

a

of while
expressing a fr
look out for rows
for "f" evaluates
to ""
(true).

(

$f(a, b) = (a + b).$
(a+b)

* while
expressing

you look out for ^a rows for
which J_r .
evaluates to
'0' (false).

1) construct T.T for the
sims

represented

by

a) $f = \{ (1, 4, 7) \}$

/

b) $f = \pi T$ (2,
7) -

a

bc

0

o o

0

2

o

|

o 10

3

o

a) $1 =$

$\{ (1, 4,$

(41)

F

\vdash

+

J

д

0

$f(a,b,c)=\ddot{a}bc$

+ абстав

o

6

o

O

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1

b) $f = \pi(2,$

l

π

$\colon)$

pos

a

bc

F

oo

oo

o

or $\$(a, b, c) =$
 $(a + b + c)$.

a

(a+b+c
)

3

o

f

o

1

o

1

0

o

c) f =

{(2,11,13,14)}

d)

f - TT

(8, 14, 15
)