1. Consert 892.035 into actal

8 1892

8 111-4

8 13-7

0.24 x8 = 1.92

1-5

0.92 x 8 = 7.36

7

2. convert A092 ento linary

10 0 9 2.

(A092)16 = (1010000010010010)2

3. Find 15's complement of F9ET

15's complement of F9ET = (0618)16

4. Find 6's complement of (362)7

6's complement of (362) = (304) =

5. Subtract 25 and 37 using d's complement

A: 25 => 010101

B: 37 => 100111 => 011000 (1'A)

011001 (2'6)

0 1 0 1 0 1 0 1 1 0 0 1 1 0 1 1 1 0 \Rightarrow 0 1 0 0 0 1 (1'4) 1 0 1 0 0 1 0 \Rightarrow - 22

25 - 37 = - 22

6. Represent the following in POS and 30P form $Y = y + xz' \qquad Z = (x + y') \cdot Z \cdot (y + z)$

Y = y(x+x')(z+z') + xz'(y+y') Y = yx+yx'(z+z') + xyz' + xy'z' Y = xyz + xyz' + x'yz + x'yz' + xyz' + xy'z' Y = xyz + xyz' + x'yz + x'yz' + xy'z' Y = x(3,3,4,6,7) $Y = \pi (0,1,5)$

I = (2z + xy'z)(y+z) Z = xyz + xz + y'z Z = xyz + xz(y+y') + y'z(x+x') Z = xyz + xyz + xy'z + xy'z + xy'z + x'y'z Z = xyz + xyz + xy'z + xy'z + x'y'z Z = xyz + xy'z + xy'z + x'y'z Z = xyz + xy'z + xy'z + x'y'z

T. Bimplify in policing Boston represent in algebraic

M = alsc + alsc + alsc + a + bc' a'b

(d+'a)(ba+b'a + a+ 'aa)= N

(d+'a)(ba+b'a + (1+'a)a)= N

(d+'a)(ba+b'a+a)= N

(d+'a)(b'a+(b+1)a)= N

(d+'a)(b'a+(b+1)a)= N

(d+a)(b'a+(b+1)a)= N

9. Find dual and complimed of F = xy + z'wdual of F = (x+y)(z'+w) F' = xy + z'w $= (xy)' \cdot (z'w)'$

F' = (x'+4')(z+w')

expression in sum of nin forms and product of mareterine form: y'z'+z'

$$F = y'z' + x'$$

$$F' = y'z' + x'$$

$$= (y'z')'(x')'$$

$$F' = (y+z)(x)$$

$$F' = xy + xz$$

$$= xy(z+z') + xz(y+y')$$

$$F' = xyz + xyz' + xyz + xy'z$$

$$F' = xyz + xyz' + xyz' + xy'z$$

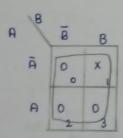
$$F' = (5,6,7)$$

$$F' = \pi(0,1,2,3,4)$$

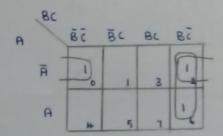
F' = (x'+y'+z') (x'+y'+z) (x'+y+z') (x+y+z) (x+y'+z')

8. Simplify using K- wap

i) F=π(0,2,3) and d=π(1)

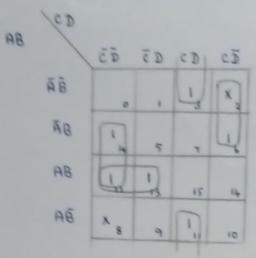


F =



Y = AC + BC Y = C(A+B) iii) == II (011,517,9,10,14,15), d-II (2,8)

Y= & (\$13,4,6,\$,11,12,13) d= 17 (3,8)



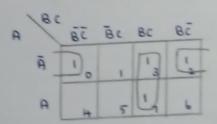
Y = B CD + A C D + B C D + AB C

1v) M = £ (113)



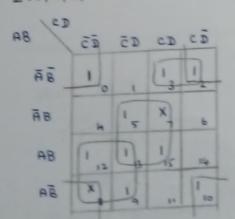
M = B

V) N = & (0,2,3,7)



N=AC+BC

Vi) T = £(0,2,3,5,9,10,12,13,15) .d = £(7,8)



T = 3 8 + B3 + AC + A BC