Use of number system

(i) It is used to communicate

(ii) It is used to perform tasks.

(iii) It is used to quantify.

(iv) It is used to measure.

$z^n = z^3 = 8$

x	y	z	Panity bit(odd)	Panity bit(even)
0	0	0	1	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	0	1

000 (There bit massage)

0+0+0→1

0+0+1 = 1

Panity bit : A panity in an extra bit enclude with the n bit binary massage to make the total number of 1's in this massage either code odd or even.

What is the difference between canonical from and standard from.

Canonical:

(i) The expression of Boolean function with the function containing all the literal in each term is called canonical from.

(ii) Two Types of canonical from.

(i) sum of minterm

(ii) product of Maxterm.

Standard from:

(i) The expression of Boolean function with the function containing one two or any nomber of letaral is called standerd from.

(11) Two Types of standard form

(i) Sum of Product.

(ii) Product of sum.

$\therefore F(ABCDE) = A'B'E' + BE + D'E$

⊞ What are dont care conditions?

Simplify the following B.F : $F(w, x, y, z) = \Sigma(1, 3, 7, 11, 15)$ and don't care conditions $d(w, x, y, z) = \Sigma(0, 2, 5)$

Don't care : The 1's and 0's in the map simplify the combination of variables that makes the function equal to 1 or 0 respectively. The combination are usually obtain from a truth table that it its the combination under which the function on is 0, 1.