**Using 1´s complement in subtraction :**

Instead of subtracting a number we add the 1´s complement of the number , the last carry is then added to the number to get the final answer .

***EX***: 7 111 111

010 +

-5 - 101 1´s

2 carry 1 001

+ ve. No. 1 +

010

***EX***: 3 011 011

-5 -101 1´s +010

-2 101

No carry -ve. No.

101 010

**9´s and 10´s complements in decimal :**

The 9´s comp. (similar to the 1´s comp.) is found by subtracting each decimal digit from 9 .

***EX***: 99

- 25

74 is the 9´s comp. of 25

***EX***: 9999

-6291

3708 is the 9´s comp.

10´s comp. = 9´s comp. + 1

***EX***: 74 + 1 =75 is the 10´s comp. of 25

***EX***: 9.99

- 4.52

5.47 is 9´s comp.

+ 1

is 10´s comp 5.48

**7´s and 8´s complements in octal :**

7´s = 7 – each digit

8´s = 7´s + 1

***EX:*** 7777

- 2415

is 7´s comp. 5362

+1

5363 is 8´s comp.

***EX:*** Perform 75268 - 31428 using 8's comp.:

7777

-3142

4635 + 1 = 4636

1 1

7526

+ 4636

12 – 8 = 4

11 - 8 = 3

12 - 8 = 4

1 4364 the result

***H.W.*** Perform the following using 8's complement:

5458 – 148 =

67768 – 43378 =