

*Single Number III

1, 2, 3, 1, 2, 5 \rightarrow 2 #s only occurring 1 time
other #s 2 times

take 'xor. \rightarrow 1010011000

one should be 1 & other 0
can be both 1s or both 0s

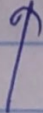
1010011000

take this & find #s having that bit as 0 \rightarrow in one bucket.
bit as 1 \rightarrow in other bucket.
take xor in each

No: _____

Date: ____/____/____

1010011000



to take this bit, we can use 2's complement.

8 = 1000

8 = reverse bits

1111 1011

add 1

1111 1000

least bit set, only that bit is

take ~~xor~~ of ~~8 xor 8~~ & ~~2 xor 8~~

00001000

11111000

00001000



taken