

For integer:-
Bitwise And:-

0 0 0
0 1 0
1 0 0
1 1 1

① num1 = 20;
num2 = 30;

20 → 0000 0001 0100
30 → 0000 0001 1110
—————
0000 0001 0100

16 + 4 = 20

② Bitwise OR

0000 0001 0100
0000 0001 1110
—————
0000 0001 1110

16 + 8 + 2 + 8 = 30

③ Bitwise XOR

0000 0001 0100
0000 0001 1110
—————
0000 0000 1010

2 + 8 = 10

Bitwise @ char
 a = 'a', b = 'b'

96
 -44
 32

Bitwise And of character
 a = 'a' → ASCII value of a is 97
 b = 'b' → ——— b is 98

a & b →

	256	128	64	32	16	8	4	2	1	
a	0	1	1	0	0	0	0	0	1	→ a
b	0	1	1	0	0	0	1	0	1	→ b
a & b	0	1	1	0	0	0	0	0	0	

$64 + 32 = 96$

Bitwise OR of 'a' & 'b'
 'a' → 97
 'b' → 98

a | b
 ↓

	128	64	32	16		8	4	2	1
a	0	1	1	0		0	0	0	1
b	0	1	1	0		0	0	1	1
a b	0	1	1	0		0	0	1	1

$64 + 32 + 2 + 1 = 99$

Bitwise XOR for 'a' & 'b'.

'a' = 97 'b' = 98
 a ^ b →

	128	64	32	16		8	4	2	1
a	0	1	1	0		0	0	0	1
b	0	1	1	0		0	0	1	1
a ^ b	0	0	0	0		0	0	1	0

3