Bit - wise operators.

Binary And ({)

4

one's Compliment (~)

(2)

(5)

Left Shift (22)

(3)

(6)

Right Shift (77)

(Binary AND (2)

-> D

80 -> 0

5 8 6

0101 0110

0100

5+6 = 11 586 = 4.

Binary OR (1) (2)

0 | 1 -> 1

0 -> |

11 -

25167

0101

0110 0111 37

(^) Binary XOR (3)

> **^** 0 0

 \mathcal{D}

0 1 -> 1

^ 0

1 ^ 1

→

516

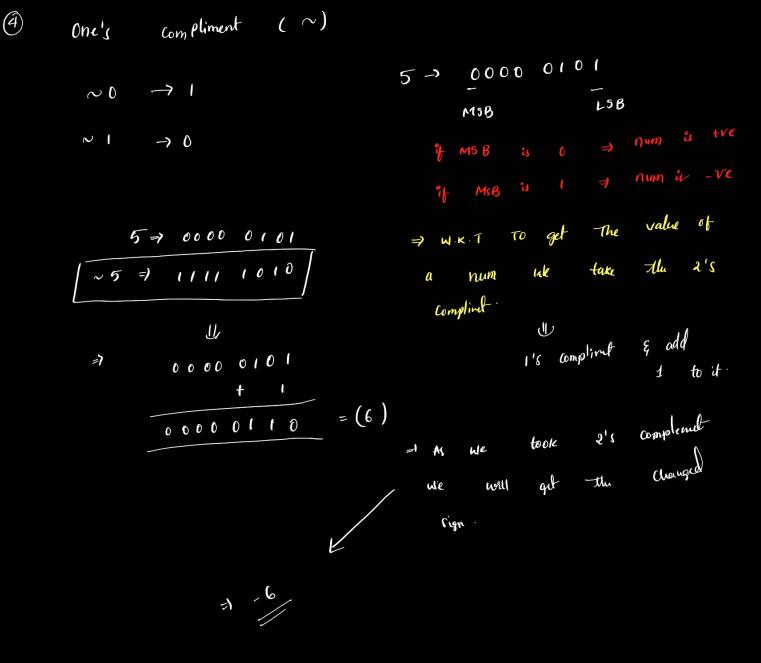
0101

0110

0 0 1 1

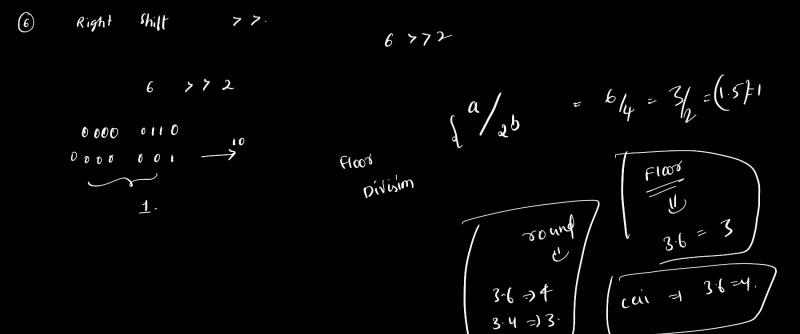
-) 3

Different bits result 1.



let shift ۷ ۷ 5 << 2 in no of digits digits to shift ax 2 0 0 0 10 1 5 7 Number 0 1 0 1 0 0 5 <(2) 5 X d 2 = 20. 5 + 3 2 1 0 0 16 0 4 0 0 = 16 ty = 20.

6



Check if hum is even or odd

$$0 \rightarrow 000$$
 $1 \rightarrow 001$
 $2 \rightarrow 010$
 $3 \rightarrow 011$
 $4 \rightarrow 100$
 $5 \rightarrow 101$
 $4 \rightarrow 100$
 $5 \rightarrow 101$
 6 qt
 $6 \text{ qt$

consider 1, 0001 Left whilf it by 2
$$\Rightarrow$$
 0100

7 0111 \Rightarrow N \neq 1 << i

8 0100

0100

Left whilf it by 2 \Rightarrow 0100

1 at 9th pot.

Consider a number 10 (1010)

and
$$i = 2$$
 \Rightarrow bit mark = 1 << i = 0.000

$$\frac{1010}{1110} \Rightarrow 14.$$

bit

zuo).

clear

Bůt

ith

3

in

L To Make

clear Bit:

Bit mark = newbit
$$22i$$

Bit mark = newbit $22i$

Permote 20000

Permote 20

(6) clear Last 9th Bilt

$$b = 0000 0011$$

$$b = (1 22(i-1))$$

$$2 - \xi = 0$$
 $= 0$ $= 0$

Process

Right chilt by **(**

in n. = Store

10

7

a a

421

35

101 3 \Rightarrow

7 (a4) (1) (1') = a5

$$\rightarrow$$
 $\alpha = 3$, and $= 1$

ans = 3

$$a = 3^{2}$$

$$\rightarrow$$
 $a=9$, and $=3$

$$ans = 3$$

$$a = 81$$
 am $= 3$

$$a - a^2 = (21)^2$$

(1) hour 2 nurs

x = 3

 $x = 3 \wedge 4$

y = 4

y = 314 14 = 3

× = 3 14 13 = 4

Flip Bits. [now many Bits should be flipped to obtain grun num B).

 $A = 7 \rightarrow 0.111$ $B = 12 \rightarrow 1100$ Cutput

~ act LSB Compase

it not equal increat count

~ Right 8hif by 1.

4 Addition = 5,3 = 8.