January 8th, 2024

Exercises.

Bit wise operators.

1:- 4 & 7 = 0100 & 0111

= 0100

AND → & 0111

0100 = 4

2:- 16 | 7 = 00010000 | 0111

00010000

OR → | 0111

00010111 = 23

3:- 2 & (~13) = 0010 & ~(1101)

0010

0010 & 0010 =

AND → & 0010

0010

0010 = 2

4:- 5 ^ 8 = 0101 ^ 1000

XOR → ^ 0101

1000

1101 = 13

January 8th, 2024

5:- 7 >> 2 = 0 1 1 1 >>
. .
Right shifting. 0 0 0 1 1 1
= 0 0 0 1 = 1

6:- 84 >> 4

0 1 0 1 0 1 0 0 >>
. . . .
0 0 0 0 0 1 0 1 0 1 0 0
= 0 1 0 1 = 5

7:- 15 << 5

<< 1 1 1 1
. . . . .
0 0 0 1 1 1 1 0 0 0 0 0 =

8:- H & (2<<3)

H = 0 1 0 0 2<<3 = 0 0 1 0
. . .
0 0 0 1 0 0 0 0 = 16
AND
& 0 0 0 0 0 1 0 0
0 0 0 1 0 0 0 0
0 0 0 0 0 0 0 0 = 0

January 8th, 2024

9.- 2 | (19 >> 1)

00010 | 000100011 >> 1

•

000010011

OR = 00001001 = 9

↓

| 00000010
| 00001001

00001011 = 11 ✓

10.- 0xFF & (0x13 << 0x2)

11111111 & 0001 0011 << 2

• •

AND 0100 1100 = 76

↓

& 1111 1111
0100 1100

0100 1100 = 76 ✓

Convertir los siguientes números a hexa.

1.- 1011 1100

B C = 0xBC ✓

2.- 1000 0001 1100

8 1 C = 0x81C ✓

JEAN

January 8th, 2024.

3- 1000 0031 00 1111
8 3 3 F
1010 = 0x833FA

4- 1111 1010 0001 = 0xFA1
F A 1

5- 1111 1111 1111 1111
F F F F
1101 1110 = 0xFFFFDE
D E

Pasar los siguientes números a binario.

1- 84 = 0101 0100

2- 0xFC15 = 1111 1100 0001 0101

3- 0x5487DA = 0101 0100 1000 0111 1101 1010

4- 298 = 0001 0010 1010

5- 0xA15CB4 = 1010 0001 0101 1100 1011 0100