BINARIO	0-1	01011_2
OTTALE	0 ... 7	356_8
DECIMALE	0 ... 9	943_{10}
ESADECIMALE	0 ... 9 A B C D E F (10 11 12 13 14 15)	$AF3B9_{16}$

$$943_{10} = 9 \cdot 10^2 + 4 \cdot 10^1 + 3 \cdot 10^0$$

$2^0 = 1$

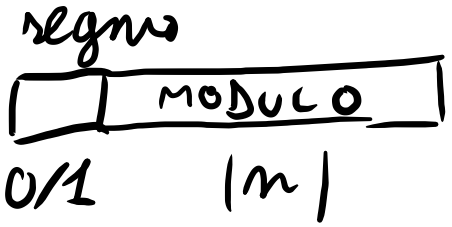
$$01011_2 = 0 \cdot 2^4 + 1 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0$$

$$= 8 + 2 + 1 = 11_{10}$$

$$3B_{16} = 3 \cdot 16^1 + 11 \cdot 16^0 = 59_{10}$$

-5_{10}

M&S

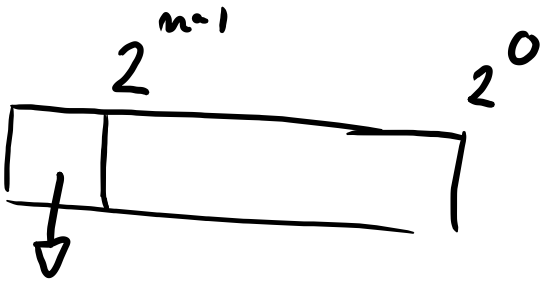


0 POS
1 NEGAT

CA_2

6 bit = 1 segno
5 modulo

[BINARIO]



$$\underset{2\ 1\ 0}{\underline{1}01}_{CA_2} = 1 \cdot (-\underline{2}^2) + 1 \cdot 2^0 = -4 + 1 = -3_{10}$$

$$\underset{2\ 1\ 0}{\underline{1}01}_{M\&S} = -(1 \cdot 2^0) = -1_{10}$$

14 |

$A = 1110011_{2\,CA_2}$

$B = 10011_{2\,CA_2}$

$A \geq B$

$A_{2CA_2} = A_{10}$

6 5 4 3 2 1 0

1 1 1 0 0 1 1

$\Rightarrow 1 \cdot (-2^6) + 2^5 + 2^4 + 2^1 + 2^0$

$= -64 + 32 + 16 + 2 + 1$

$= -13_{10}$

$B = 10011_{2CA2}$

4 3 2 1 0

$\Rightarrow -2^4 + 2^1 + 2^0 = -13_{10}$

$A = B$

11

$-16_{10} \rightarrow \_\_\__2 \rightarrow \_\_\_\_\__{2CA_2}$

16	0
8	0
4	0
2	0
1	1
0	

/2 /2

$16_{10} = 10000_2$

$10000_2 \longrightarrow$ — $_{CA_2}$

$10000 \rightarrow 01111 \rightarrow$

INVERTO $\quad +1$

$$\begin{array}{r} 1111 \\ 01111 + \\ \qquad 1 = \\ \hline 10000 \end{array}$$

$10000_2 \rightarrow 10000_{2CA_2}$

CONTROLLO $-2^4 = -16$

IN $CA_2 \quad -2^{n-1} \leq x \leq 2^{n-1} - 1$

$-2^4 \leq x \leq 2^4 - 1 \rightarrow -16 \leq x \leq 15$

$+10_{10} = \_\_\_\__{2CA_2}$

10	0
5	1
2	0
1	1
0	

$10_{10} = 1010_2 = 01010_{2\,CA2}$

2^4

4 3 2 1 0

$-16_{10} = \underline{1}0000_2 = \underline{1}\_\_\_\_$

?

10000

1 4

$n = 5$

NON POSSO RAPP.

IN MdS $\quad -2^{n-1} - 1 \leq x \leq 2^{n-1} - 1$

$-15 \leq x \leq 15$

$+10_{10} = 1010_2 = \underset{1}{0}\,\underset{4}{1010} = 01010_{2\text{mes}}$

9 $+177_{10}$

177	1
88	0
44	0
22	0
11	1
5	1
2	0
1	1
0	

$177_{10} = 10110001_2$

ecuelocco

177	1
22	6
2	2
0	

$177_{10} = 261_8 = B1_{16}$

$1\,0\,1\,1\,0\,0\,0\,1$

$1\,0\,2\,1\,0\,2\,1\,0$

$2^1 \quad 2^2+2^1 \quad 2^0$

$2 \quad 6 \quad 1$

$1\,0\,1\,1\,0\,0\,0\,1$

$3\,2\,1\,0\,3\,2\,1\,0$

$2^3+2^1+2^0 \quad 2^0$

$B \quad 1$

177	1
11	11 → B
0	

$= B1$

8

$24_{10} \rightarrow 11000_2$ $\quad$ $47_{10} \rightarrow 101111_2$

24	0
12	0
6	0
3	1
1	1
0	

47	1
23	1
11	1
5	1
2	0
1	1
0	

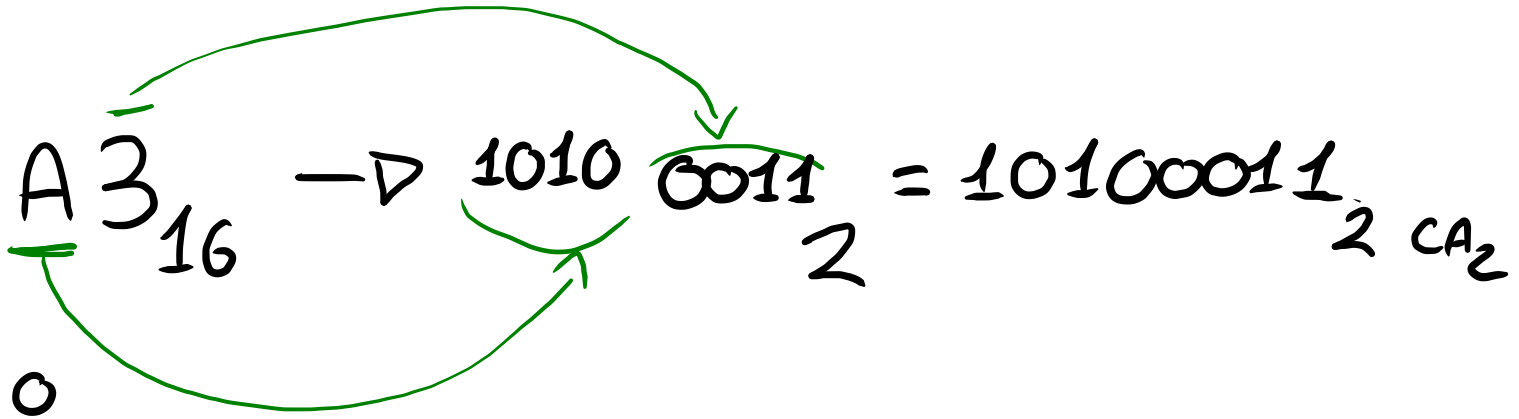
$$\begin{array}{r} \cancel{0}11000 + \\ 101111 = \\ \hline 1000111 \end{array}$$

$24_{10} + 47_{10} = 1000111_2$

410 OVERFLOW

NON POSSO RAPP. SU 6 BIT

3|



10	0
5	1
2	0
1	1
0	

↑ A

3	1
1	1
0	

↑ $3_{16} = 11_2$

$7F_{16} = 0111\ 1111 = 01111111_{2CA_2}$

7	1
3	1
1	1
0	

15	1
7	1
3	1
1	1

$A3 = 1010\,0011_{2cA}$

$7F = 0111\,1111_{2cA}$

```
 1 1 1 1 1 1 1
  1010 0011 +
  0111 1111 =
-----------
 1 0010 0010
```

CARRY SUL MSB

OVERFLOW SE SEGNO CONCORDE

```
0.....
0.....
1.....
1.....
```

HO CARRY SUL MSB

NO OVERFLOW SE SEGNO DISCORDE

```
0.....
1.....
```

BUTTO VIA