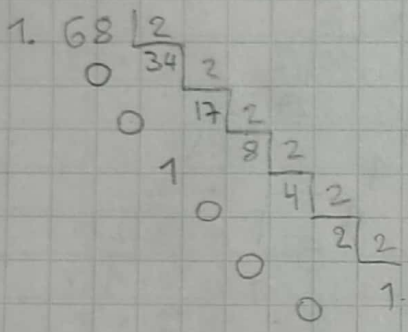
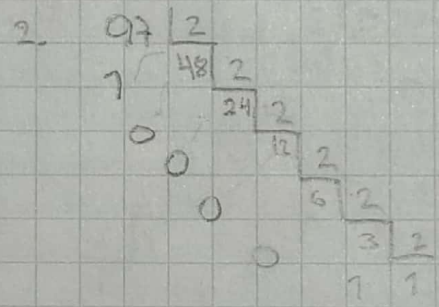
Laboratorio # 1

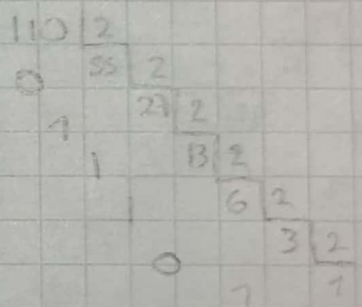
1 Tabla con caracter, Decima Asscii y binario

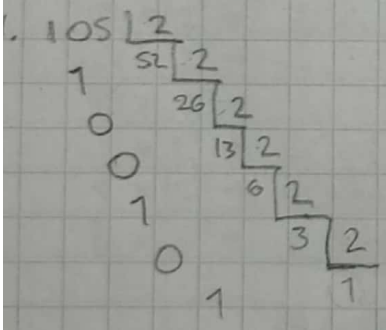
#1 nombre

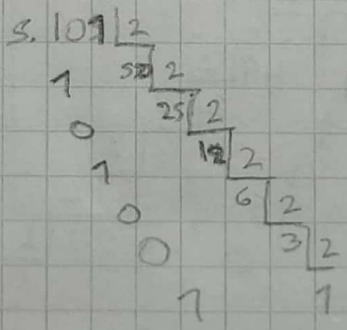
Caracter	Decimal Assci	#s Binario
D	68	1000100
a	97	1100001
n	110	1101110
i	105	1101001
e	101	1100101
l	108	1101100

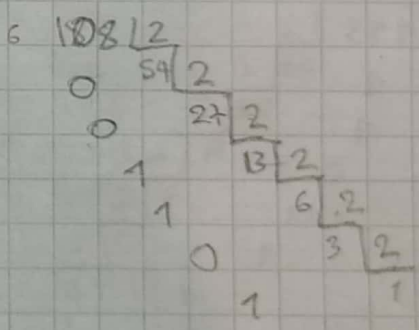






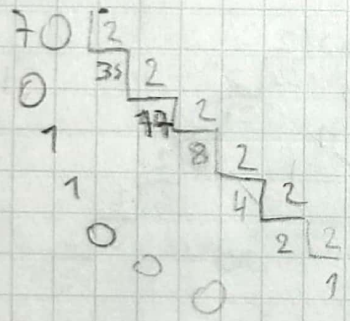


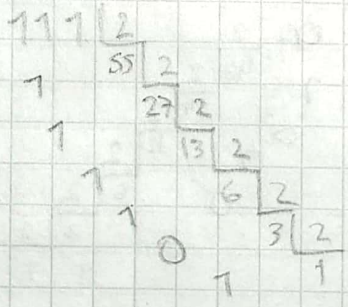


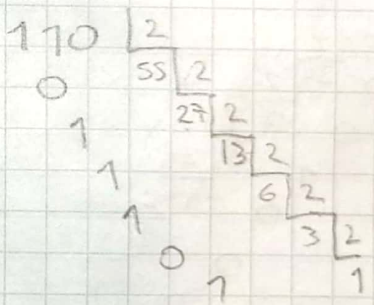


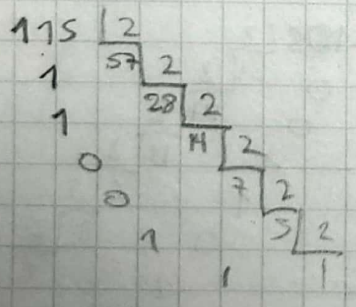
1.1 Apellido

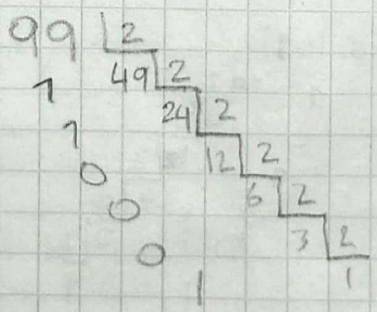
Caracter	Decimal Accsii	Binario
F	70	1000110
o	111	1101111
n	110	1101110
s	115	1110011
e	101	1100101
c	99	1100011
a	97	1100101





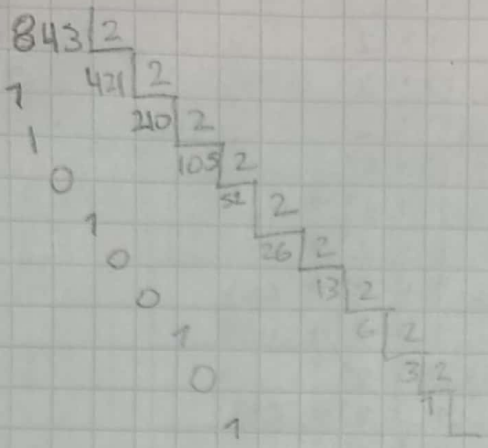






DD MM AA

2 convertir 843 a numeros binarios



Binario: 1101001 1011

3 conversión de binarios a decimal y hexadecimal

Binarios

a.) 1110010 011110 = 14.686

Decimal

hexadecimal
395E

0 × 2^0 → 1
1 × 2^1 → 2
1 × 2^2 → 4
1 × 2^3 → 8
1 × 2^4 → 16
0 × 2^5 →
1 × 2^6 → 64
0 × 2^7 →
1 × 2^8 → 256
0 × 2^9 →
0 × 2^{10} →
1 × 2^{11} → 2048
1 × 2^{12} → 4.096
1 × 2^{13} → 8,192

14.686

14 686
(3)·(4096) + 2398
(9)(256) + 94
(5)(16) + 14

3 / 4096s 9 / 256s 5 / 16s E / 1s = 395E

b.) 1 1 1 1 1 1 1 1 1 1 1 1 1 = 8191

Decimal entero:

hexadecimal:
1FFF

$16^0 = 1$
$16^1 = 16$
$16^2 = 256$
$16^3 = 4096$

1 × 2^0 → 1
1 × 2^1 → 2
1 × 2^2 → 4
1 × 2^3 → 8
1 × 2^4 → 16
1 × 2^5 → 32
1 × 2^6 → 64
1 × 2^7 → 128
1 × 2^8 → 256
1 × 2^9 → 512
1 × 2^{10} → 1024
1 × 2^{11} → 2048
1 × 2^{12} → 4096

8191 =

8191 = (1)4096 + 4095
(15)(256) + 255
(15)(16) + 15

1 / 4096s F / 256s F / 16s F / 1s = 1FFF

c. 1000000000001 = decimal 2049 = hexadecimal 801

$1 \times 2^0 \rightarrow 1$
0×2^1
0×2^2
0×2^3
0×2^4
0×2^5
0×2^6
0×2^7
0×2^8
0×2^9
0×2^{10}
$1 \times 2^{11} \rightarrow 2049$

2049

(8). (256) +1

$\frac{8}{256s}$ $\frac{0}{16s}$ $\frac{1}{1s}$ = 801

d. 1010101111000000 Decimal 10992

0×2^0
0×2^1
0×2^2
0×2^3
$1 \times 2^4 \rightarrow 16$
$1 \times 2^5 \rightarrow 32$
$1 \times 2^6 \rightarrow 64$
$1 \times 2^7 \rightarrow 128$
0×2^8
$1 \times 2^9 \rightarrow 512$
0×2^{10}
$1 \times 2^{11} \rightarrow 2048$
0×2^{12}
$1 \times 2^{13} \rightarrow 8192$
10992

hexadecimal 2AFO

10992

(2)(4096) + 2800

10(256) + 240

$\frac{2}{4096s}$ $\frac{A}{256}$ $\frac{F}{16s}$ $\frac{0}{1}$ 15-16 = 2AFO

4 Tabla de numeración

# hexadecimal	# binario	# decimal	# hexadecimal	# binario	# Decimal
1	1	1	B	1011	11
2	10	2	C	1100	12
3	11	3	D	1101	13
4	100	4	E	1110	14
5	101	5	F	1111	15
6	110	6	10	10000	16
7	111	7	11	10001	17
8	1000	8	12	10010	18
9	1001	9	13	10011	19
A	1010	10	14	10100	20

# hexadecimal	# binario	# Decimal
15	10101	21
16	10110	22
17	10111	23
18	11000	24
19	11001	25
1A	11010	26
1B	11011	27
1C	11100	28
1D	11101	29
1E	11110	30
1F	11111	31
20	100000	32

5 Cual es el siguiente numero hexadecimal al 19F

19F
210

$16^0 \times F = F = 15$
$16^1 \times 9 = 144$
$16^2 \times 1 = 256$

$256 + 144 + 15 = 415$

(416)
$(1)(256) + (160)$
$(10)(16)$

$\frac{1}{256_s} \quad \frac{A}{16_s} \quad \frac{0}{1_s} = 1A0$

el numero siguiente es 1A0 (416)