Sistema de Procesamiento de datos

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HOJA N° 1

FECHA

4) Pasar a binario.

a) 4342 | 2
0 | 2171 | 2
1 | 1085 | 2
1 | 542 | 2
0 | 271 | 2
1 | 135 | 2
1 | 67 | 2
1 | 33 | 2
1 | 16 | 2
0 | 8 | 2
0 | 4 | 2
0 | 2 | 2
0 | 1 | 2
1 | 0

4342d = 1000011110110b

b) 2047 | 2
1 | 1023 | 2
1 | 511 | 2
1 | 255 | 2
1 | 127 | 2
1 | 63 | 2
1 | 31 | 2
1 | 15 | 2
1 | 7 | 2
1 | 3 | 2
1 | 1 | 2
1 | 0

2047d = 11111111111b

c) 1DF9h

1DF9 → FH = 15d | 2 → 14 | 7 | 2 → 6 | 3 | 2 → 2 | 1 | 2 → 1 | 0
Fh = 1111b

1DF9 → Dh = 13 | 2 → 12 | 6 | 2 → 6 | 3 | 2 → 2 | 1 | 2 → 1 | 0
Dh = 1101b

1DF9 → 9h = 9 | 2 → 8 | 4 | 2 → 4 | 2 | 2 → 2 | 1 | 2 → 1 | 0
9h = 1001b

1DF9 → 1h = 1 | 2 → 1 | 0
1h = 0001b

1DF9h = 0001 1101 1111 1001

ⓓ 94EBDh

9h = 9d

9 / 12 = 0 resto 9
0 / 12 = 0 resto 0
9h = 9d = 1001b

4h = 4d

4 / 12 = 0 resto 4
4h = 4d = 0100b

Eh = 14d

14 / 12 = 1 resto 2
1 / 12 = 0 resto 1
Eh = 14d = 1110b

Bh = 11d

11 / 12 = 0 resto 11
Bh = 11d = 1011b

Dh = 13d

13 / 12 = 1 resto 1
1 / 12 = 0 resto 1
Dh = 13d = 1101b

94EBDh = 1001 0100 1110 1011 1101

② Pasar a decimal

ⓐ FCA71h = $\sum_0^n d_i * b^i$

Pos 4 Pos 3 Pos 2 Pos 1 Pos 0

suma del valor de los dígitos

Peso . digito

base posición

FCA71h = 15.16^4 + 12.16^3 + 10.16^2 + 7.16^1 + 1.16^0

923040 + 49152 + 2560 + 112 + 1

FCA71h = 1034865d

ⓑ 777h = 7.16^2 + 7.16^1 + 7.16^0

777h = 1911d

ⓒ 1010111011b = 1.2^0 + 1.2^1 + 0.2^2 + 1.2^3 + 1.2^4 + 1.2^5 + 1.2^6 + 0.2^7 + 1.2^8 + 0.2^9 + 1.2^10

base = 2

1010111011 = 1403d

ⓓ 0100110016 = 1.16^0 + 0.16^1 + 0.16^2 + 1.16^3 + 1.16^4 + 0.16^5 + 0.16^6 + 1.16^7 + 0.16^8

0100110016 = 153d

3) Pasar a Hexadecimal

a) 89012d

89012 / 16 = 5568 resto 4 → 4h
5568 / 16 = 348 resto 0 → 0h
348 / 16 = 21 resto 12 → Ch
21 / 16 = 1 resto 5 → 5h
1 → 1h

89012d = 15C04h

b) 110111d

110111 / 16 = 6881 resto 15 → Fh
6881 / 16 = 430 resto 1 → 1h
430 / 16 = 26 resto 14 → Eh
26 / 16 = 1 resto 10 → Ah
1 → 1h

110111d = 1AE1Fh

c) 10 1011 1011 0111b

$1.2^0 + 1.2^1 + 1.2^2 + 0.2^3 = 7d = 7h$

$1.2^0 + 1.2^1 + 0.2^2 + 1.2^3 = 11d = Bh$

$1.2^0 + 1.2^1 + 0.2^2 + 1.2^3 = 11d = Bh$

$0.2^0 + 1.2^1 = 2d = 2h$

10 1011 1011 0111b = 2BB7h

d) 1 11106

$0.2^0 + 1.2^1 + 1.2^2 + 1.2^3 = 14d = Eh$

$1.2^0 = 1d = 1h$

11110b = 1Eh

NOTA