

1. Convierte:

$$23_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$16_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$93_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$47_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$52_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$101_{(10)} = \underline{\hspace{2cm}}_{(2)}$$

$$1101110_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$1100_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$111101_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$1000101_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$10101001_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$23_{(10)} = \underline{\hspace{2cm}}_{(8)}$$

$$54_{(10)} = \underline{\hspace{2cm}}_{(8)}$$

$$776_{(10)} = \underline{\hspace{2cm}}_{(8)}$$

$$8361_{(10)} = \underline{\hspace{2cm}}_{(8)}$$

$$5721_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$403_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$63_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$41_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$352_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$1593_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$A70D4_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

$$F5CCA_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

$$BBACE_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

$$B00A_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

$$14HAB_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

$$1111,0101_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$10101011,0001_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$10010001101101,1101_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$1011101011011,1010_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$111110001,0100_{(2)} = \underline{\hspace{2cm}}_{(10)}$$

$$253,4_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$22155,6_{(8)} = \underline{\hspace{2cm}}_{(10)}$$

$$AB,1_{(16)} = \underline{\hspace{2cm}}_{(10)}$$

2. Convierte y calcula:

a) $39_{(16)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(2)}$

b) $101101_{(2)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(8)}$

c) $225_{(8)} = \underline{\hspace{2cm}}_{(16)} = \underline{\hspace{2cm}}_{(2)}$

d) $C_{3(2)} = \underline{\hspace{2cm}}$ ($2 = \underline{\hspace{2cm}}$) (10)

e) $11010111_{(2)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(2)}$

f) $E_{2(16)} = \underline{\hspace{2cm}}$ ($10 = \underline{\hspace{2cm}}$ (16

g) $161_{(8)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(16)}$

h) $F_{3(16)} - 73_{(8)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(10)}$

i) $48_{(10)} + 57_{(16)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(16)}$

j) $10111011_{(2)} - 46_{(8)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(10)}$

k) $95_{(16)} + 123_{(8)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(16)} = \underline{\hspace{2cm}}_{(10)}$

l) $77_{(8)} + 65_{(10)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(8)}$

m) $E_{4(16)} - 126_{(10)} = \underline{\hspace{2cm}} (2 = \underline{\hspace{2cm}} (16)$

n) $341_{(8)} - 1110001_{(2)} + 31_{(16)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(16)}$

o) $115_{(10)} + 162_{(8)} + 11001_{(2)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(16)} = \underline{\hspace{2cm}}_{(8)}$

3. Representa en coma flotante de simple precisión:

a) 11101,11101000000

b) $-101,001110110100$

c) 0,0000001011010010

¿Qué números reales, en notación exponencial y en binario puro, representan las siguientes cadenas si corresponden a representación en coma flotante de simple precisión?

[illegible][illegible]

4. Representa:

a) $427_{(8)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(2)}$

b) $1011011_{(2)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(8)}$

c) $ABC_{(16)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(2)}$

d) $27,5_{(8)} = \underline{\hspace{2cm}}_{(2)} = \underline{\hspace{2cm}}_{(10)}$

e) $F5, C_{(16)} = \underline{\hspace{2cm}}$ (10 = $\underline{\hspace{2cm}}$ (2

f) $127,7_{(8)} = \underline{\hspace{2cm}}_{(10)} = \underline{\hspace{2cm}}_{(16)}$

5. Completa la siguiente tabla:

Binario	Octal	Decimal	Hexadecimal
10111,0111			
	41,7		
		2,625	
			2F,C

6. Representa en 1 byte:

	Módulo y signo	Complemento a 1	Complemento a 2	Sesgado
$-100_{(10)}$				
$123_{(8)}$				
$-6E_{(16)}$				
$_{(10)}$	11000011			
$_{(10)}$		01001100		

7. Indica cuál es el número real, en binario puro, que está representado en coma flotante de simple precisión por:

C	2	9	F	A	0	0	0
---	---	---	---	---	---	---	---

[illegible]

B	E	4	D	6	9	0	0
---	---	---	---	---	---	---	---

[illegible]

8. Las siguientes cadenas representan registros estructurados. Teniendo en cuenta los formatos de representación y la estructura de los registros, ¿qué datos contienen?

9 A 3 5 3 7 3 3 3 0 4 3 4 1 4 7 4 2 9 F A 0 0 0 5 3

nº formato byte → nº coche

7 caracteres → nº matrícula

c.f.s.p. → ingresos

1 carácter → ¿alquilado?

C E 5 3 4 9 4 D 5 2 4 7 1 9 C A 8 0 4 3

nº formato byte → nº aula

4 caracteres → cod. Asign.

c.f.s.p. → fecha y hora
sabiendo que el 1-10-2008 corresponde al nº 39356

entero → nº alumnos

9. Representa con una cadena en hexadecimal el registro correspondiente a los siguientes datos:

nº formato byte → nº aula 218

4 caracteres → cod. Asign. PLE

c.f.s.p. → fecha y hora 16-10-2008 18:00
sabiendo que el 1-10-2008 corresponde al nº 39356

entero → nº alumnos 53