

Ficha 2

Grupo 1

1. a) 0011100 . 1111

$$\begin{aligned}0011100 &= 2^2 + 2^3 + 2^4 \\&= 28\end{aligned}$$

$$\begin{aligned}.1111 &= 2^{-1} + 2^{-2} + 2^{-3} + 2^{-4} \\&= 0.9375\end{aligned}$$

Resposta = 28.9375

b) 000111111 . 1001111

$$\begin{aligned}000111111 &= 2^0 + 2^1 + 2^2 + 2^3 + 2^4 + 2^5 \\&= 63\end{aligned}$$

$$\begin{aligned}.1001111 &= 2^{-1} + 2^{-4} + 2^{-5} + 2^{-6} + 2^{-7} \\&= 0.6171875\end{aligned}$$

Resposta = 63.6171875

2. a) 17 . 375

$$17 = 2^0 + 2^4 \equiv 10001_2$$

$$.375 = 2^{-2} + 2^{-3} \equiv 0.011_2$$

Resposta = 10001.011

b) 28 . 1234

$$28 = 2^2 + 2^3 + 2^4 \equiv 11100_2$$

$$.1234 = 2^{-4} + 2^{-5} + 2^{-6} + 2^{-7} + 2^{-8} + 2^{-9} + 2^{-12} + 2^{-14} + 2^{-15} + 2^{-16} + 2^{-19} \equiv 0001111110010111001_2$$

Resposta = 11100.000111110010111001

Grupo 2

a) 00110111 – 00011001

0	0	1	1	0	1	1	1
0	0	0	1	1	0	0	1
0	0	0	1	1	1	1	0

b) 03ABCD – 0023AB

0	3	A	B	C	D
0	0	2	3	A	B
0	3	8	8	2	2

c) 48602A – 15FEDF

4	8	6	0	2	A
1	5	F	E	D	F
3	2	6	1	4	B

Grupo 3

a) -89
 $89 = 2^0 + 2^3 + 2^4 + 2^6 \equiv 1011001_2$
invertir os bits
 $1011001 \rightarrow 0100110$
somar 1

0	1	0	0	1	1	0
						1
0	1	0	0	1	1	1

Resposta = 0100111

b) -627
 $627 = 2^0 + 2^1 + 2^4 + 2^5 + 2^6 + 2^9 \equiv 1001110011_2$
invertir os bits
 $1001110011 \rightarrow 0110001100$
somar 1

0	1	1	0	0	0	1	1	0	0
									1
0	1	1	0	0	0	1	1	0	1