Lista 9 - IEEE754

1 a) $5B = ?_{(10)} = 22$

0	1	0	1	1	0	1	1
S	E				M		

$1,011 \times 2^4 = 10110$

$B = 2^{4-1} - 1 = 7$

$11 - 7 = R$

$11 - 9 = 4$

b) ~~9,25~~$_{(10)} = ?$

$1,00101$

1	1	0	1	0	0	0	1
E				M			

$B = 2^4 - 1 = 7$

nº real + B = nº máquina

$3 + 9 = 10$

2 a) | 1 | 000 000 00 | 0 1 1 0 1 0 1 1 | 0 0 1 0 1 1 0 1 |

$E = 1 - B \rightarrow 1 - 127 = -126 + -23 = \boxed{-149}$

$B = 2^{8-1} - 1 = 127$

credeal

b) $B = 2^{11-1} - 1 = 1023$

$B + Nr = Nm$

$3 - 1023 = Nr = -1020$

1×2^{1020}

3a) $14,125 = 01010110 = 86$

$1110,001 \rightarrow 1,110001 \times 2^3$

0	1010	110
S	E	M

$B = 2^{4-1} - 1 = 7$

$B + M = 10$

b) $-58,375$

$-111010,011 \rightarrow -1,1101011 \times 2^5$

1	1	1	0	0	1	1	0
S	E			M			

$B = 2^{4-1} - 1 = 7$

$B + 5 = 12$

4a) 0 1000 0001 0110 ... 000

$B = 2^{8-1} - 1 = 127$

1011×2^{2}

$Nr = 129 - 127 = 2$

5,5

b) 1 | 1000 0001 | 0001
S | E | M

E = 129
B = 127

4,25

Nr = 129 - 127 = 2

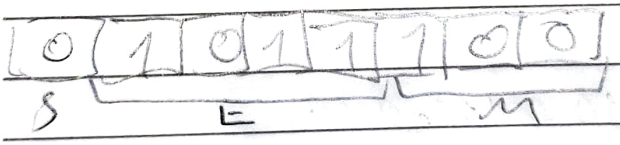
$1,0001 \times 2^2 = 100,4$

5) - 0 111 (9)
1101 (1)
0101 (5)

9) → 0) → b)

6) $1,12 \times 10^2$ $2,24 \times 10^{-1}$
112 x 0,224

25,088
112,224



B = 9
4+9 = M

Volta:

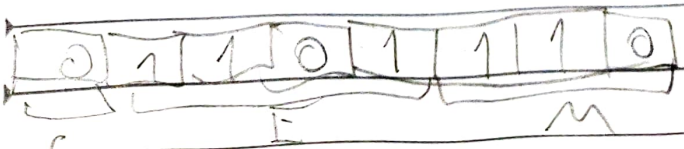
1100 x 2^4 = 11000
= 24

VA = 1088

11 = 9 + Nr
= 4

VR = 4,33 %

112,224

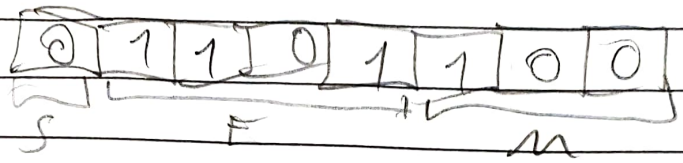


7 a) Soma

112, 224

↳ 111 0000, 0011 1001 0100 1100 0000 0001

2^6



$B = 2^{3-1} - 1 = 2^2 - 1 = 4 - 1 = 3$

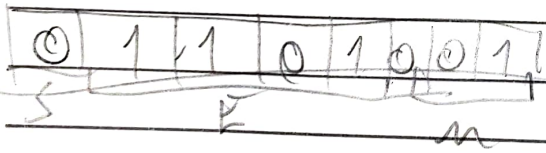
VA = 98, 224
VR = 87, 52 %

b) Mult,

25, 088

↳ 6, 1001 0001 0110 1000 1100 11

$1,1001 \cdot \rightarrow 2^4$



B = 3

VA = 12, 88
VR = 80, 17 %