Lista de exercícios 04

Exercício 3)

a) 1024×10^{-20}

$1024 = (10000000000)_2$

$-20 = (1\,10100)_2$

NORMALIZANDO:

$(0\ 1\ 0010100\ 100000\ 00000\ 000000\ 000000)_2$

b) $-0,10725 \times 10^{+15}$

$-0,10725 = (1\ 0,000\,11011\ 01110\ 10010\ 11110)_2$

$0,10725 \times 2 = 0,2145$
$0,2145 \times 2 = 0,429$
$0,429 \times 2 = 0,858$
$0,858 \times 2 = 1,716$

$0,716 \times 2 = 1,432$
$0,432 \times 2 = 0,864$
$0,864 \times 2 = 1,728$
$0,728 \times 2 = 1,456$

$0,456 \times 2 = 0,912$
$0,912 \times 2 = 1,824$
$0,824 \times 2 = 1,648$
$0,648 \times 2 = 1,296$
$0,296 \times 2 = 0,592$

$0,592 \times 2 = 1,184$
$0,184 \times 2 = 0,368$
$0,368 \times 2 = 0,736$
$0,736 \times 2 = 1,472$
$0,472 \times 2 = 0,944$

$0,944 \times 2 = 1,888$
$0,888 \times 2 = 1,776$
$0,776 \times 2 = 1,552$
$0,552 \times 2 = 1,104$
$0,104 \times 2 = 0,208$

NORMALIZANDO:

$(1\ 0\ 10001100\ 11011\ 01110\ 10010\ 11110\ 000)_2$

c) 510,00375

$510,00375\ (1\,11111\,1110,0000\ 0000\ 1111)_2$

$0,00375 \times 2 = 0,0075$
$0,0075 \times 2 = 0,0150$
$0,0150 \times 2 = 0,03$
$0,03 \times 2 = 0,06$

$0,06 \times 2 = 0,12$
$0,12 \times 2 = 0,24$
$0,24 \times 2 = 0,48$
$0,48 \times 2 = 0,96$

$0,96 \times 2 = 1,92$
$0,92 \times 2 = 1,84$
$0,84 \times 2 = 1,68$
$0,68 \times 2 = 1,36$

NORMALIZANDO:

$(0\ 0\ 0001010\ 11111\ 11100000\ 00001111)_2$

4)

a) $(0,2 \times 12^{-20})_8\ (0,4 \times 10^{-11})_{16}$

b) $(-0,0667227 \times 12^{317})_8\ (-0,1B74BC \times 10^{+F})_{16}$

c) $(0,77600170 \times 12^{13})_8\ (0,FE005 \times 10^{13})_{16}$

5)

a) $104 = (0001\ 0000\ 0100\ (1))_{BCD}$

b) $7503 = (0111\ 0101\ 0000\ 0011\ (0))_{BCD}$