

04.04.21

Eletrônica Digital

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Turma: SI em Tecnologia em Telemática - IFCE

1) $(100001)_{10} = ()_2$

$100001 \div 2$

(1) 50000 2

(0) 25000 2

(0) 12500 2

(0) 6250 2

(0) 3125 2

(1) 1562 2

(0) 781 2

(1) 390 2

(0) 195

* continuação:

195 2

(1) 97 2

(1) 48 2

(0) 24 2

(0) 12 2

(0) 6 2

(0) 3 2

(1) (1)

→ Sol: $(110000110100001)_2$

2) $(FACA)_{16} = ()_{10}$

FACA → 1111 1010 1100 1010 (16)

F A C A

$10 \times 16^0 = 10$
 $12 \times 16^1 = 192$
 $10 \times 16^2 = 2560$
 $15 \times 16^3 = 61440$

$61440 + 2560 + 192 + 10 =$

Sol: $(64202)_{10}$

tilibra

③ $(100001, 1111)_2 = ()_{10};$

① $\begin{array}{r} 1 \ 0 \ 0 \ 0 \ 0 \ 1 \\ 2^5 + 2^4 + 2^3 + 2^2 + 2^1 + 2^0 \\ \hline 32 \ 0 \ 0 \ 0 \ 0 \ 1 \end{array} = \boxed{33}$

② $\frac{1}{2^{-1}} \frac{1}{2^{-2}} \frac{1}{2^{-3}} \frac{1}{2^{-4}}$

$0,5 + 0,25 + 0,125 + 0,0625 = \boxed{0,9375}$

→ ③ $33 + 0,9375 =$

$\boxed{33,9375}$

④ $(300, 25)_{10} = ()_2;$

① $\begin{array}{r} 300 \ 2 \\ (0) \ 150 \end{array}$

$(0) \ 75 \ 2$

$(1) \ 37 \ 2$

$(1) \ 18 \ 2$

$(0) \ 9 \ 2$

$(1) \ 4 \ 2$

$(0) \ 2 \ 2$

$(0) \ (1)$

② $\begin{array}{l} 0,25 : 2 = 0,125 \\ 0,125 : 2 = 0,0625 \end{array} = 01$

Sol: $(100101100, 01)_2$

⑤ $(500)_{10} = ()_{16};$

$\begin{array}{r} 500 \ 16 \\ (4) \ 21 \ 16 \\ (15) \ (3) \end{array}$

Sol = $(1F4)_{16}$

⑥ $(850)_{10} = ()_2;$

$\begin{array}{r} 850 \ 2 \\ (0) \ 425 \ 2 \\ (1) \ 212 \ 2 \end{array}$

$(0) \ 106 \ 2$

$(0) \ 53 \ 2$

$(1) \ 26 \ 2$

$(0) \ 13 \ 2$

* continuamos *

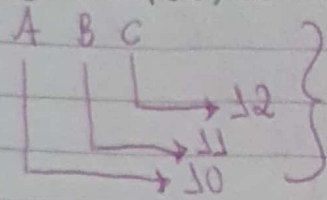
$\begin{array}{r} 13 \ 2 \\ (1) \ 6 \ 2 \end{array}$

$(0) \ 3 \ 2$

$(1) \ (1)$

Sol: $(1101010010)_2$

⑦ $(1ABC)_{16} = ()_{10};$



$1 = 1 \times 16^3 = 4096$

$A = 10 \times 16^2 = 2560$

$B = 11 \times 16^1 = 176$

$C = 12 \times 16^0 = 12$

$4096 + 2560 + 176 + 12 =$

Sol: $(6844)_{10}$

⑧ $(1011101)_2 = ()_{16};$

$\begin{matrix} 6 & 5 & 4 & 3 & 2 & 1 & 0 \\ 1 & 0 & 1 & 1 & 1 & 0 & 1 \end{matrix}$

$2^6 + 2^4 + 2^3 + 2^2 + 2^0 =$

$64 + 16 + 8 + 4 + 1 = 93;$

$\hookrightarrow 93 / 16$
 $(13) (5)$

$13 = D$, logo

Sol: $(5D)_{16}$

⑨ $(23, 125)_{10} = ()_2;$

① $23 / 2$
 $(1) 11 / 2$
 $(1) 5 / 2$
 $(1) 2 / 2$
 $(10) (1)$

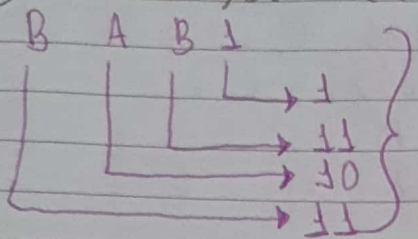
$= 10111$

② $\begin{matrix} 0, 125 \cdot 2 = 0, 250 \\ 0, 250 \cdot 2 = 0, 50 \\ 0, 50 \cdot 2 = 1 \end{matrix} \Bigg\} = 001$

\rightarrow Sol: $(10111, 001)_2$

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30 (BAB1)₁₆ = ()₂;



$B = 11 \times 16^3 = 45.056$

$A = 10 \times 16^2 = 2560$

$B = 11 \times 16^1 = 176$

$1 = 1 \times 16^0 = 1$

$45056 + 2560 + 176 + 1 = 47.793$

47793 | 2

(1) 23896 | 2

(0) 11928 | 2

(0) 5974 | 2

(0) 2987 | 2

(1) 1493 | 2

(1) 746 | 2

(0) 373 | 2

(1) 186 | 2

(0) 93 | 2

(1)

*Continuando:

93 | 2

(1) 46 | 2

(0) 23 | 2

(1) 11 | 2

(1) 5 | 2

(1) 2 | 2

(0) (1)

Sol: (1011101010110001)₂