Pauta Tarea 1

① $122,23_5$

$X_{10} \rightarrow 1 \cdot 5^2 + 2 \cdot 5^1 + 2 \cdot 5^0 + 2 \cdot 5^{-1} + 3 \cdot 5^{-2}$

$25 + 10 + 2 + 0,4 + 0,12$

$\boxed{X_{10} = 37,52_{10}}$

$X_2 \rightarrow 37,52 - 2^5 \rightarrow 1$

$5,52 - 2^4 \rightarrow 0$

$5,52 - 2^3 \rightarrow 0$

$5,52 - 2^2 \rightarrow 1$

$1,52 - 2^1 \rightarrow 0$

$1,52 - 2^0 \rightarrow 1$

$0,52 - 2^{-1} \rightarrow 1$

$0,02 - 2^{-2} \rightarrow 0$

$\boxed{X_2 = 100101,10_2}$

100001

$X_{16} \rightarrow 0010\ 0101, 1000$

$X_{16} = 25,8_{16}$

$X_3 \rightarrow 37{,}52 - 3^3 \rightarrow 1$

$10{,}52 - 3^2 \rightarrow 1$

$1{,}52 - 3^1 \rightarrow 0$

$1{,}52 - 3^0 \rightarrow 1$

$0{,}52 - 3^{-1} \rightarrow 1$

$0{,}18\overline{6} - 3^{-2} \rightarrow 1$

$0{,}07\overline{5}$

$\boxed{X_3 = 1101{,}11_3}$

(2) $37{,}52 - 2^5 \rightarrow 1$

$5{,}52 - 2^4 \rightarrow 0$

$5{,}52 - 2^3 \rightarrow 0$

$5{,}52 - 2^2 \rightarrow 1$

$1{,}52 - 2^1 \rightarrow 0$

$1{,}52 - 2^0 \rightarrow 1$

$0{,}52 - 2^{-1} \rightarrow 1$

$0,02 - 2^{-2} \rightarrow 0$

$0,02 - 2^{-3} \rightarrow 0$

$0,02 - 2^{-4} \rightarrow 0$

$0,02 - 2^{-5} \rightarrow 0$

$0,02 - 2^{-6} \rightarrow 1$

$0,0043750 < 0,01$

Se necesitan 12 bits

(3) $131_{10} - 156_{10}$

$131_{10} \rightarrow X_2 = 1000\ 0011_2$

$156_{10} \rightarrow X_2 = 1001\ 1100_2$

$-156_{10} \rightarrow X_{comp2} = 0110\ 0100_{comp}$

$1000\ 0011$

$+\ 0110\ 0100$

$1\,110\,0111_{comp2} = -25_{10}$

(4) $131_{10} - 97_{10}$

reserve reserve

$$\begin{array}{r} 0001\ 0011\ 0001 \\ -\ 0000\ 1001\ 0111 \\ \hline 0000\ 1001\ 1010 \\ -\ 0000\ 0110\ 0110 \\ \hline 0000\ 0011\ 0100_{BCD} \end{array}$$

$X_{10} = 34_{10}$