

# CONVERSIONES Y OPERACIONES

## • Conversión binario - octal

$$\begin{aligned} 1- & 101111_2 \\ & = 101 \ 111 \\ & = \underline{\underline{57_8}} \end{aligned}$$

$$\begin{aligned} 2- & 10010101 \\ & = 010 \ 010 \ 101 \\ & = \underline{\underline{225_8}} \end{aligned}$$

$$\begin{aligned} 3- & 100010111010 \\ & = 100 \ 010 \ 111 \ 010 \\ & = \underline{\underline{4272_8}} \end{aligned}$$

## • Conversión binario - hexadecimal

$$\begin{aligned} 1- & 1011 \\ & = \underline{\underline{B_{16}}} \end{aligned}$$

$$\begin{aligned} 2- & 1010110001 \\ & = 0010 \ 1011 \ 0001 \\ & = \underline{\underline{2B1_{16}}} \end{aligned}$$

$$\begin{aligned} 3- & 101110110111001 \\ & = 0101 \ 1101 \ 1011 \ 1001 \\ & = \underline{\underline{5DB9_{16}}} \end{aligned}$$

## • Conversión octal - binario

$$\begin{aligned} 1- & 303_8 \\ & = 011 \ 000 \ 011 \\ & = \underline{\underline{11000011_2}} \end{aligned}$$

$$\begin{aligned} 2- & 475_8 \\ & = 100 \ 111 \ 101 \\ & = \underline{\underline{10011101_2}} \end{aligned}$$

$$\begin{aligned} 3- & 777_8 \\ & = 111 \ 111 \ 111 \\ & = \underline{\underline{11111111_2}} \end{aligned}$$

## • Conversión hexadecimal - binario

$$\begin{aligned} 1- & 9AB_{16} \\ & = 1001 \ 1010 \ 1011 \\ & = \underline{\underline{100110101011_2}} \end{aligned}$$

$$\begin{aligned} 2- & 53C_{16} \\ & = 0101 \ 0011 \ 1100 \\ & = \underline{\underline{10100111100_2}} \end{aligned}$$

$$\begin{aligned} 3- & ABC_{16} \\ & = 1010 \ 1011 \ 1100 \\ & = \underline{\underline{101010111100_2}} \end{aligned}$$

## • Suma binaria

$$\begin{array}{r} 10010 \\ + 01111 \\ \hline 100001 \end{array}$$

$$\begin{array}{r} 0100 \\ + 1000 \\ \hline 1100 \end{array}$$

$$\begin{array}{r} 101.001 \\ + 011.111 \\ \hline 1001.000 \end{array}$$

## • Resta binaria

$$\begin{array}{r} 100 \\ - 001 \\ \hline 011 \end{array}$$

$$\begin{array}{r} 1100 \\ - 1011 \\ \hline 0001 \end{array}$$

$$\begin{array}{r} 10111 \\ - 01100 \\ \hline 01011 \end{array}$$

## • Multiplicación binaria

$$\begin{array}{r} 111 \\ \times 010 \\ \hline 000 \\ 111 \\ \hline 000 \\ 1110 \end{array}$$

$$\begin{array}{r} 01011 \\ \times 11111 \\ \hline 01011 \\ 01011 \\ 01011 \\ 01011 \\ 01011 \\ \hline 1001101 \end{array}$$

$$\begin{array}{r} 10010 \\ \times 100 \\ \hline 00000 \\ 00000 \\ 10010 \\ \hline 1001000 \end{array}$$

## • División binaria

$$\begin{array}{r} 0111 \\ 11 \overline{) 10101} \\ \underline{- 101} \\ 11 \\ \underline{- 1100} \\ 11 \\ \underline{- 11} \\ 11 \\ \underline{- 11} \\ 0 \end{array}$$

$$\begin{array}{r} 0111 \\ 10 \overline{) 11110} \\ \underline{- 10} \\ 11 \\ \underline{- 10} \\ 0 \end{array}$$

$$\begin{array}{r} 00100 \\ 111 \overline{) 11101} \\ \underline{- 111} \\ 001 \end{array}$$