

$$2. 1101_2 \times 11_2$$

$$1101_2 = 13_{10}$$

$$11_2 = 3_{10}$$

$$13 \times 3 = 39 = 100111_2 //$$

$$6. 1000001_2 \div 101_2$$

$$1000001_2 = 65_{10}$$

$$101_2 = 5_{10}$$

$$65 \div 5 = 13 = 1101_2 //$$

$$3. 1010_2 \times 101_2$$

$$1010_2 = 10_{10}$$

$$101_2 = 5_{10}$$

$$10 \times 5 = 50 = 110010_2 //$$

$$4. 11000_2 \div 10_2$$

$$11000_2 = 24_{10}$$

$$10_2 = 2_{10}$$

$$24 \div 2 = 12 = 1100_2 //$$

$$5. 101010_2 \div 110_2$$

$$101010_2 = 42_{10}$$

$$110_2 = 6_{10}$$

$$42 \div 6 = 7 = 111_2 //$$

1 1  
 1 0 1 0 1 0 1 0  
 1 0 1 0 1 0 1 0

7.  $11011_2$

$$\begin{array}{r} 011010 \\ \underline{100110} \end{array}$$

$$+ \begin{array}{r} 100110 \\ \underline{110110} \\ 101100 \end{array} \rightarrow 44_{10}$$

8.  $100000_2$

$$\begin{array}{r} 001101 \\ \underline{110011} \\ 100000 \end{array}$$

$$010011 = 19_{10}$$

9.  $111001_2$

$$\begin{array}{r} 101100 \\ \underline{010100} \\ 111001 \\ \underline{001101} \end{array} \rightarrow 15_{10}$$

10.  $01100_2$

$$\begin{array}{r} 00111 \\ \underline{11001} \\ 01100 \\ \underline{00101} \end{array} \rightarrow 5_{10}$$

# Exercícios de Multiplicação e Divisão de Binários

1.  $101_2 \times 10_2$

$$101_2 = 5_{10}$$

$$10_2 = 2_{10}$$

$$5 \times 2 = 10 = 1010_2$$

12.05

## ORGANIZAÇÃO e ARQUITETURA de COMPUTADORES

### EXERCÍCIOS de SUBTRAÇÃO BINÁRIA (Complemento 2)

$$\begin{array}{r}
 \overset{0}{1} \overset{10}{0} \overset{0}{1} \overset{0}{0} \\
 \underline{01101} \\
 01001
 \end{array}
 \rightarrow
 \begin{array}{r}
 10010 \\
 \underline{1} \\
 10011
 \end{array}
 +
 \begin{array}{r}
 10110 \\
 \underline{10011} \\
 01001 //
 \end{array}$$

$$\begin{array}{r}
 2. \quad 10100 \\
 \underline{1} \\
 10101
 \end{array}
 +
 \begin{array}{r}
 11000 \\
 \underline{10101} \\
 01101 // = 13
 \end{array}$$

$$\begin{array}{r}
 3. \quad 11001 \\
 \underline{1} \\
 11010
 \end{array}
 +
 \begin{array}{r}
 10100 \\
 \underline{11010} \\
 01110 // = 14
 \end{array}$$

$$\begin{array}{r}
 4. \quad 01100 \\
 \underline{1} \\
 01101
 \end{array}
 +
 \begin{array}{r}
 11110 \\
 \underline{01101} \\
 01011
 \end{array}$$

$$\begin{array}{r}
 5. \quad 010100 \\
 \underline{1} \\
 101011
 \end{array}
 +
 \begin{array}{r}
 101011 \\
 \underline{1} \\
 101100
 \end{array}
 +
 \begin{array}{r}
 101000 \\
 \underline{101100} \\
 1011100 //
 \end{array}$$

$$\begin{array}{r}
 6. \quad 101111 \\
 \underline{+ 010010} \\
 101100
 \end{array}
 +
 \begin{array}{r}
 101110 \\
 \underline{10111} \\
 29 //
 \end{array}$$