

Genesys
Ensayo
Julian

Ejer. 2

Arquitectura y Sist. Operativos

a) 101010

$$2 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^2 + 1 \cdot 2^0 = 64 + 16 + 4 + 1 = 85$$

b) 110011 = $1 \cdot 2^5 + 1 \cdot 2^4 + 0 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0 = 32 + 16 + 2 + 1 = 51$

d) 1111111 = $1 \cdot 2^6 + 1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0 =$

$$64 + 32 + 16 + 8 + 4 + 2 + 1 = 127$$

d) 1110 = $1 \cdot 2^3 + 1 \cdot 2^2 + 1 \cdot 2^1 + 0 \cdot 2^0 = 8 + 4 + 2 = 14$

c) 1101101110 = $1 \cdot 2^9 + 1 \cdot 2^8 + 1 \cdot 2^7 + 0 \cdot 2^6 + 1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 0 \cdot 2^0 =$

$$512 + 256 + 128 + 0 + 32 + 16 + 8 + 4 + 0 + 0 = 948$$

f) 10110110 = $1 \cdot 2^7 + 0 \cdot 2^6 + 1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 0 \cdot 2^0 =$

$$128 + 32 + 16 + 8 + 2 = 186$$

g) 111001 = $1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^3 + 0 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 = 32 + 16 + 8 + 1 = 57$

h) 101000 = $1 \cdot 2^4 + 0 \cdot 2^3 + 0 \cdot 2^2 + 0 \cdot 2^1 + 0 \cdot 2^0 = 16 + 0 = 16$

i) 100000001 = $1 \cdot 2^8 + 1 \cdot 2^0 = 256 + 1 = 257$

j) 1111000 = $1 \cdot 2^6 + 1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^3 + 0 \cdot 2^2 + 0 \cdot 2^1 + 0 \cdot 2^0 =$

$$64 + 32 + 16 + 8 = 120$$

k) 101012 = $1 \cdot 2^4 + 0 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 = 16 + 4 + 1 = 21$

l) 10112 = $1 \cdot 2^3 + 0 \cdot 2^2 + 1 \cdot 2^1 + 1 \cdot 2^0 = 8 + 2 + 1 = 11$

Ejer 2

a) 31_{10}

10000

$$\begin{array}{r} 10 \overline{) 31} \\ 0 \underline{30} \\ 0 \underline{1} \\ 0 \underline{1} \\ 0 \underline{1} \\ 0 \end{array}$$

b) 143_{10}

10010011

$$\begin{array}{r} 02 \overline{) 143} \\ 0 \underline{14} \\ 1 \underline{13} \\ 0 \underline{13} \\ 0 \underline{1} \\ 0 \underline{1} \\ 0 \underline{1} \\ 0 \underline{1} \end{array}$$

c) 43_{10}

100101011

$$\begin{array}{r} 02 \overline{) 43} \\ 0 \underline{4} \\ 1 \underline{3} \\ 0 \underline{3} \\ 0 \underline{1} \\ 0 \underline{1} \\ 0 \underline{1} \end{array}$$

d) 80_{10}

101010000

$$\begin{array}{r} 04 \overline{) 80} \\ 0 \underline{8} \\ 0 \underline{20} \\ 0 \underline{10} \\ 0 \underline{5} \\ 0 \underline{2} \\ 0 \underline{0} \end{array}$$

e) 3312_{10}

0325613

0183813

073913

0346913

090613413

010913

11213

175813

11023

02213

041413

110713

1313

111

1110101011000

f) 145_{10}

1100100011

057213

1105613

071813

0913

1413

4213

$$g) 4568 \text{ L}_2$$

0/

$$284 \text{ L}_2$$

0/

$$1142 \text{ L}_2$$

0/

$$571 \text{ L}_2$$

1/

$$285 \text{ L}_2$$

1/

$$142 \text{ L}_2$$

2/

$$381 \text{ L}_2$$

1/

$$1512 \text{ L}_2$$

1/

$$811$$

0/

$$941$$

1/

$$941$$

$$\underline{110001110110001}$$

$$h) 3200 \text{ L}_2$$

0/

$$1000 \text{ L}_2$$

0/

$$800 \text{ L}_2$$

0/

$$400 \text{ L}_2$$

0/

$$100 \text{ L}_2$$

0/

$$100 \text{ L}_2$$

0/

$$30 \text{ L}_2$$

0/

$$25 \text{ L}_2$$

0/

$$0512 \text{ L}_2$$

1/

$$0161$$

$$932$$

1/

$$i) 5871 \text{ L}_2$$

1/

$$2931 \text{ L}_2$$

0/

1/

1/

0/

$$146 \text{ L}_2$$

1/

0/

1/

0/

1/

0/

1/

0/

1/

0/

1/

0/

1/

$$\underline{10010010111}$$

$$j) 8672 \text{ L}_2$$

0/

$$4236 \text{ L}_2$$

0/

$$2108 \text{ L}_2$$

0/

$$1004 \text{ L}_2$$

0/

$$542 \text{ L}_2$$

0/

$$271 \text{ L}_2$$

1/

$$135 \text{ L}_2$$

1/

$$6712$$

1/

$$3212$$

1/

$$16$$

$$\underline{10000111000001}$$

$$k) 321 \text{ L}_2$$

1/

$$160 \text{ L}_2$$

0/

$$80 \text{ L}_2$$

0/

$$40 \text{ L}_2$$

0/

$$20 \text{ L}_2$$

0/

$$10 \text{ L}_2$$

0/

1/

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1/

$$\underline{101010110}$$

m) $205 \overline{) 10251260512}$