

1) Utilizando Magnitude com sinal:

Representar na base 2 o número decimal  $(-13)_{10}$

Representar na base 10 o número binário  $(10101100)_2$

0000 1101 (+)

1000 1101 (-)

$$-(13)_{10} = (1000 1101)_2$$

$\underline{10101100}_2$   
 $\rightarrow (-1)$

$$1 \times 2^5 + 1 \times 2^3 + 1 \times 2^2 = (32 + 8 + 4) \times (-1) = -44$$

$$(10101100)_2 = (-44)_{10}$$

$$\begin{array}{r} (-13)_{10} \\ 13 \overline{) 2} \\ \textcircled{1} 6 \overline{) 2} \\ \textcircled{0} 3 \overline{) 2} \\ \textcircled{1} 1 \overline{) 2} \\ \textcircled{1} 0 \end{array}$$

4) Utilizando complemento de 1:

Representar na base 2 o número decimal  $(-27)_{10}$

Representar na base 10 o número binário  $(10101000)_2$

00011011

$\underline{00011011}$   
 11100100

$$(-27)_{10} = (11100100)_2$$

$\underline{110101000}_2$

$\underline{01010111}_2$   
 $\rightarrow -$

$$1 \times 2^6 + 1 \times 2^4 + 1 \times 2^2 + 1 \times 2^1 + 1 \times 2^0$$

64      16      4      2      1

-87

$$(110101000)_2 = (-87)_{10}$$

$$\begin{array}{r} (-27)_{10} \\ 27 \overline{) 2} \\ \textcircled{1} 13 \overline{) 2} \\ \textcircled{1} 6 \overline{) 2} \\ \textcircled{0} 3 \overline{) 2} \\ \textcircled{1} 1 \overline{) 2} \\ \textcircled{1} 0 \end{array}$$

5) Utilizando complemento de 2:

Representar na base 2 o número decimal  $(-46)_{10}$

Representar na base 10 o número binário  $(10101101)_2$

$$(-46)_{10} = (111010001)_2$$

00101110  
 10101110  
 11010001

$\underline{(10101101)_2}$   
 $\underline{10101100}$   
 $\underline{01010001}$

$$1 \times 2^6 + 1 \times 2^4 + 1 \times 2^1 + 1 \times 2^0 = 64 + 16 + 2 + 1 = 83$$

$$(10101101)_2 = (-83)_{10}$$

$$\begin{array}{r} (-46)_{10} \\ 46 \overline{) 2} \\ \textcircled{0} 23 \overline{) 2} \\ \textcircled{1} 11 \overline{) 2} \\ \textcircled{1} 5 \overline{) 2} \\ \textcircled{1} 2 \overline{) 2} \\ \textcircled{0} 1 \overline{) 2} \\ \textcircled{1} 0 \end{array}$$