Numeric conversions

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1 Decimal → binary

$$100_{(10} = 1100100_{(2}$$
$$30_{(10} = 11110_{(2}$$
$$500_{(10} = 111110100_{(2}$$
$$251_{(10} = 11111011_{(2}$$

2 Decimal → hexadecimal

$$100_{(10} = 64_{(16}$$
$$30_{10} = 1E_{(16}$$
$$500_{10} = 1F4_{(16}$$
$$251_{10} = FB_{(16}$$

3 Decimal → octal

$$100_{(10} = 144_{(8}$$
$$30_{10} = 24_{(8}$$
$$500_{10} = 764_{(8}$$
$$251_{10} = 373_{(8}$$

4 Binary → decimal

$$\sigma_{(2} = 1100100_{(2} = \sum_{\lambda=0}^{6} \sigma_\lambda 10^\lambda = 2^2 + 2^5 + 2^6 = 100_{(10}$$

$$\sigma_{(2} = 11110_{(2} = \sum_{\lambda=0}^{4} \sigma_\lambda 10^\lambda = 2 + 2^2 + 2^3 + 2^4 = 30_{(10}$$

$$\sigma_{(2} = 111110100_{(2} = \sum_{\lambda=0}^{8} \sigma_\lambda 10^\lambda = 2^2 + 2^4 + 2^5 + 2^6 + 2^7 + 2^8 = 500_{(10}$$

$$\sigma_{(2} = 11111011_{(2} = \sum_{\lambda=0}^{7} \sigma_\lambda 10^\lambda = 1 + 2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^7 = 251_{(10}$$

5 Binary → hexadecimal

$$1100100_{(2} = 64_{(16}$$
$$11110_{(2} = 1E_{(16}$$
$$111110100_{(2} = 1F4_{(16}$$
$$11111011_{(2} = FB_{(16}$$

6 Binary → octal

$$1100100_{(2} = 144_{(8}$$
$$11110_{(2} = 36_{(8}$$
$$111110100_{(2} = 764_{(8}$$
$$11111011_{(2} = 373_{(8}$$

7 Hexadecimal → decimal

$$64_{(16} = 1100100_{(2} = \sum_{\lambda=0}^{6} \sigma_\lambda 10^\lambda = 2^2 + 2^5 + 2^6 = 100_{(10}$$

$$1E_{(16} = 11110_{(2} = \sum_{\lambda=0}^{4} \sigma_\lambda 10^\lambda = 2 + 2^2 + 2^3 + 2^4 = 30_{(10}$$

$$1F4_{(16} = 111110100_{(2} = \sum_{\lambda=0}^{8} \sigma_\lambda 10^\lambda = 2^2 + 2^4 + 2^5 + 2^6 + 2^7 + 2^8 = 500_{(10}$$

$$FB_{(16} = 11111011_2 = \sum_{\lambda=0}^{7} \sigma_\lambda 10^\lambda = 1 + 2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^7 = 251_{(10}$$

8 Hexadecimal → binary

$$64_{(16} = 1100100_{(2}$$

$$1E_{(16} = 11110_{(2}$$

$$1F4_{(16} = 11124110100_{(2}$$

$$FB_{(16} = 11111011_2$$

9 Octal → decimal

$$144_{(8} = 1100100_{(2} = \sum_{\lambda=0}^{6} \sigma_\lambda 10^\lambda = 2^2 + 2^5 + 2^6 = 100_{(10}$$

$$36_{(8} = 11110_{(2} = \sum_{\lambda=0}^{4} \sigma_\lambda 10^\lambda = 2 + 2^2 + 2^3 + 2^4 = 30_{(10}$$

$$764_{(8} = 111110100_{(2} = \sum_{\lambda=0}^{8} \sigma_\lambda 10^\lambda = 2^2 + 2^4 + 2^5 + 2^6 + 2^7 + 2^8 = 500_{(10}$$

$$373_{(8} = 11111011_2 = \sum_{\lambda=0}^{7} \sigma_\lambda 10^\lambda = 1 + 2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^7 = 251_{(10}$$

10 Octal → binary

$$144_{(8} = 1100100_{(2}$$

$$36_{(8} = 11110_{(2}$$

$$764_{(8} = 111110100_{(2}$$

$$373_{(8} = 11111011_2$$

11 Text → ASCII

$$Alvaro = 65\ 108\ 118\ 97\ 114\ 111$$

$$Fernandez = 70\ 101\ 114\ 110\ 97\ 110\ 100\ 101\ 122$$

$$Barrero = 66\ 97\ 114\ 144\ 101\ 114\ 111$$

12 ASCII → text

$$53\ 69\ 73\ 74\ 65\ 6D\ 61\ 73 = Sistemas$$