

Practice Exercises N 1

Exercise 1: Convert the following numbers:

$$(32)_8 = (?)_2 = (?)_{16}$$

$$(18)_{10} = (?)_8 = (?)_{16}$$

$$(A01)_{16} = (?)_2 = (?)_8$$

$$(101101,01)_2 = (?)_8 = (?)_{10} = (?)_{16}$$

Exercise 2

1. The number (10101010) is represented in 2's complement. What is its decimal value?
2. Calculate in binary (2's complement on 8 bits) : 30-12.

Exercise 3

1. Convert π to binary (base 2) (with the approximation $\pi = 3.125$)
2. Code $\pi = 3.125$ according to IEEE 754 standard (single precision) and give the result in Hexadecimal form.
3. Deduce $-\pi$.

Exercise 4

The number $X = (C0\ D4\ 00\ 00)_{16}$ is coded according to IEEE 754 Standard - single precision

What is the decimal value of X ?