Laboratory work number 6

Subject: Study and empirical analysis of algorithms that determine a N decimal digit of PI

Overview:

In this lab we will study algorithms that allow us to determine the Nth decimal place of PI. PI is an irrational number and for this reason it is infinite. Finding an efficient algorithm that will allow the determination of the Nth digit of PI is a complex problem.

**BASIC TASK**:

1 Implement at least 2 algorithms that determine the Nth decimal digit of Pi in a programming language. (For ten you need to implement 3 algorithms)

2 Choose metrics for comparing algorithms

3 Perform empirical analysis of the proposed algorithms

4 Make a graphical presentation of the data obtained

5 Make a conclusion on the work done.

Links where you can find theory about the alghoritms:

1. <http://numbers.computation.free.fr/Constants/Algorithms/nthdecimaldigit.pdf>
2. <https://dev.to/anshul2910/finding-the-nth-digit-of-pi-3nhl>
3. <https://www.cut-the-knot.org/Curriculum/Algorithms/SpigotForPi.shtml>