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Fibonacci Experiments

Below is a table comparing the runtimes (in milliseconds) of recursive and iterative methods of computing Fibonacci numbers.

Recursively (in millis) Iteratively (in millis)

fib(3) 0 (negligible) 0 (negligible)

fib(10) 0 (negligible) 0 (negligible)

fib(15) 1 0 (negligible)

fib(25) 8 1

fib(28) 9 1

fib(30) 13 1

fib(35) 58 1

fib(40) 550 1

fib(45) 5966 1

fib(48) 25893 1

If the data was collected accurately, recursion is clearly much more costly than iteration in terms of runtime; however, based on the extremely low runtimes of iteration, I am not confident this experiment was conducted correctly. Although I expected recursion to be more costly than iteration, this data suggests a much more drastic difference between the two methods than I believed.