

Name: Vince Gabriel V. Avila **Section:** CPE21S4

Explanation:

The number of operations is identical because both ways it traverses every element when adding. Recursion consumes too much memory as it needs to call functions many times whereas iteration uses less memory than recursion. Recursion is efficient in generating the Fibonacci series for small numbers since it uses a lot of memory and processing power repeating calculations, but for larger numbers Recursion becomes inefficient.

Conclusion:

For some uses, like Fibonacci, recursion requires only a little extra memory but it may be slower than not using recursion. Loops are faster and consume less memory but advised when the input is above 10^5 . Recursion is elegant but not suitable for heavy calculations as it consumes a lot of memory on the call stack.