

Measurement Results

N (run 1000 times)	Recursive time (in clock ticks)	Iterative time (in clock ticks)
1	7	5
5	49	10
10	558	22
15	7264	41
20	74668	57
25	792631	58
30	8.91847e+06	67

Comparison

While the iterative and recursive times are fairly close when n is relatively low, the difference between the iterative and recursive times widens as n increases. Furthermore, the iterative times tend to grow at a fairly consist rate. The recursive times increase at an exponential rate, growing wildlly longer very quickly.

Analysis

The difference in time efficiency between iterative and recursive solutions is minimal when using smaller values (in this case, n). As those values increase, recursive solutions become exponentially less time efficient. We can take away from this experiment, that if you are deciding between implementing a function recursively or iteratively, if you want the function to accept larger values and remain efficient, it's beneficial to use iteration.