

Pseudocode:

get_number()

 GET number

 RETURN number

francois(number)

 IF number == 1 #1

 RETURN 2

 ELSE IF number == 2 #2

 RETURN 1

 ELSE #3

 RETURN francois(number - 1) + francois(number - 2)

display_francois(final_number)

 PUT final_number #4

main()

 number = get_number()

 final_number = francois(number)

 display_francois(final_number)

main()

Algorithmic Efficiency: $O(2^N)$, due to it's recursive nature in the end of the function

Trace:

TEST CASE: 2

	Number
#1	2

#2	1
#4	1