

# Chef and Guess by Mod

Chef has a hidden number  $N$

, you have to guess this number.

You can ask almost 150

queries to Chef and in each query, you give a number  $x$  to Chef (which should be between 1 and  $2 * 10^{18}$  (both inclusive)), and Chef will tell you the value of  $N \% x$ , i.e the remainder when  $N$  is divided by  $x$

.

Find the number  $N$

.

Use the given [solution template](#)

Fill the function `guess()`. You can call the function `n_mod_x(x)` to get the value of  $N \% x$ , however you should not call the function more than 150 times.

## Instructions

Fill in the function `guess()` given in the [solution template](#).

## Constraints

- $2 \leq N \leq 10^{18}$
- The numbers given to Chef must be in the range  $[1, 2 * 10^{18}]$
- (both inclusive)

## Local Tester

[local tester](#) is a python program that you can use to verify your solution. Copy paste your `guess` function and you can see the results by changing the input to the given function.