

## E. Lostborn

time limit per test: 2 seconds  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

Igor K. very much likes a multiplayer role playing game WineAge II. Who knows, perhaps, that might be the reason for his poor performance at the university. As any person who plays the game, he is interested in equipping his hero with as good weapon and outfit as possible.

One day, as he was reading the game's forum yet again, he discovered a very interesting fact. As it turns out, each weapon in the game is characterised with  $k$  different numbers:  $a_1, \dots, a_k$ . They are called hit indicators and according to the game developers' plan they are pairwise coprime.

The damage that is inflicted during a hit depends not only on the weapon's characteristics, but also on the hero's strength parameter. Thus, if the hero's strength equals  $n$ , than the inflicted damage will be calculated as the number of numbers on the segment , that aren't divisible by any hit indicator  $a_i$ .

Recently, having fulfilled another quest, Igor K. found a new Lostborn sword. He wants to know how much damage he will inflict upon his enemies if he uses it.

### Input

The first line contains two integers:  $n$  and  $k$  ( $1 \leq n \leq 10^{13}$ ,  $1 \leq k \leq 100$ ). They are the indicator of Igor K's hero's strength and the number of hit indicators.

The next line contains space-separated  $k$  integers  $a_i$  ( $1 \leq a_i \leq 1000$ ). They are Lostborn sword's hit indicators. The given  $k$  numbers are pairwise coprime.

### Output

Print the single number — the damage that will be inflicted by Igor K.'s hero when he uses his new weapon.

**Please, do not use the %lld specifier to read or write 64-bit integers in C++. It is preferred to use the cin, cout streams or the %I64d specifier.**

### Examples

input
20 3 2 3 5
output
6
input
50 2 15 8
output
41