Problem K
The Bad Number

Input File: K.IN
Output File: standard output
Program Source File: K.C, K.CPP, K.JAVA

John and Brus believe that number **N** is a very bad number. Thus they try to avoid it every time and everywhere.

Now the guys would like to represent number **M** as a sum of positive numbers, each of which not exceeding **K**. But don't forget about the bad number **N**! Each summand must not be divisible by **N**, moreover the number of summands also must not be divisible by **N**.

Your task is to find the minimal possible number of summands in such representation of **M**.

For example, if **N**=3, **M**=11, **K**=6 then we can represent **M** as **5+6**, but as far as **6** is divisible by **3** we must have at least **3** summands. But as far as **N**=3 we can't have **3** summands and thus the answer is **4**. One of the possible ways to represent **M** is **11**=**4+4+2+1**.

Input: standard input
The first line contains single integer **T** – the number of test cases. Each test case consists of a single line containing three integers **N, M** and **K** separated by single spaces.

Output: standard output
For each test case print a single line containing the minimal possible number of summands according to the requirements described above. If it is impossible to do this output "**-1**" (quotes for clarity) instead.

Constraints:
1 ≤ T ≤ 74,
1 ≤ N, M, K ≤ 1000000000 (10^9).

Sample:

Input	Output
2 3 11 6 2 12 47	**4** **−1**