

Peter has n cigarettes. He smokes them one by one keeping all the butts. Out of $k > 1$ butts he can roll a new cigarette.

How many cigarettes can Peter have?

Input

Input is a sequence of lines. Each line contains two integer numbers giving the values of n and k . The input is terminated by end of file.

Output

For each line of input, output one integer number on a separate line giving the maximum number of cigarettes that Peter can have.

Sample Input

```
4 3
10 3
100 5
```

Sample Output

```
5
14
124
```