Base Sums

Given three values ***n***, ***a***, and ***b***, find the smallest ***m***>***n*** such that the sum of the digits of ***m*** in base ***a*** is the same as the sum of digits of ***m*** in base ***b***.

Input

Each input will consist of a single test case. Note that your program may be run multiple times on different inputs. There will be a single line of input, with three integers, ***n*** ($0 \le n \le 10^{16}$), ***a*** and ***b*** ($2 \le a < b \le 36$), all of which will be in base **10**.

Output

Output a single integer, ***m***, which is the smallest number greater than ***n*** such that the sum of its digits in base ***a*** is the same as the sum of its digits in base ***b***. Output ***m*** in base **10**.

Sample Input	Sample Output
`66 10 16`	`144`
`24 4 15`	`90`
`9358385 11 32`	`9437362`