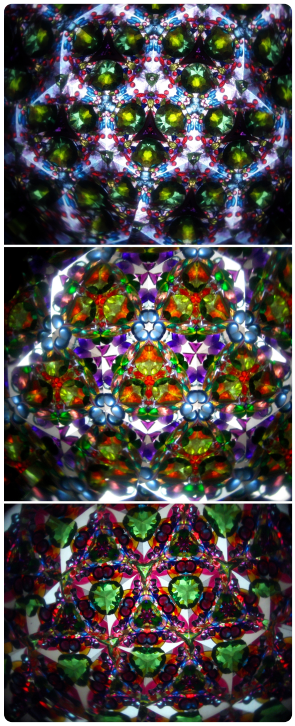
Problem H. Kaleidoscopic Palindromes

Time limit	5000 ms
Mem limit	1048576 kB
OS	Linux



Nicholas Neverson was a student at Northlings Neverland Academy. As with any daydreaming student, Nicholas was playing around with a Kaleidoscope one day instead of paying attention to the teacher. Since this was math class, his daydreams quickly turned to palindromic numbers. A palindromic number is any number which reads the same forwards and backwards.

He describes his vision to you at lunch: numbers which are palindromic in several bases at once. Nicholas wonders how many such numbers exist. You decide you can quickly code up a program that given a range and a number k, outputs the number of numbers palindromic in all bases j, $2 \leq j \leq k$, in that range.

Input

Input consists of three space-separated integers: a, b, and k. The input satisfies the following constraints:

\[0 \leq a \leq b \leq 2\, 000\, 000, \\ 2 \leq k \leq 100\, 000. \]

Output

Output the quantity of numbers between a and b inclusive which are palindromes in every base j, for $2 \leq j \leq k$.

Sample 1

Input	Output
1 356 2	36

Sample 2

Input	Output
18 118 13	0