Problem B. Conditions

Input file:	*standard input*
Output file:	*standard output*
Time limit:	1 second
Memory limit:	256 mebibytes

You are given a list a that contains n different positive integers, a positive integer k, and a positive integer ℓ. Find the smallest integer x that is greater than or equal to ℓ and satisfies **exactly** one condition among the following ones:

- x is in the list a;
- x is **not** divisible by k;
- x contains 7 in its decimal representation.

Input

The first line contains two integers n and k ($1 \le n \le 10^5$, $2 \le k \le 10^5$).

The second line contains n integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le 10^{18}$).

The third line contains a single integer ℓ ($1 \le \ell \le 10^{18}$).

Output

Output a single integer, the answer to the problem.

Examples

standard input	*standard output*
5 9 181 182 184 178 81 173	183
1 888 888 888	888

Note

In the sample, the integers $173, 174, 175, 176, 177, 179, 181, 182$ satisfy two conditions. The integer 178 satisfies three conditions. The integer 180 does not fulfill any conditions. Finally, the integer 183 satisfies exactly one condition: it is **not** divisible by 9.