

Problem G. Hash

Input file: *standard input*
 Output file: *standard output*
 Time limit: 2 seconds
 Memory limit: 256 mebibytes

A HAIKU is a string that consists of at most 50 lowercase English letters. For a HAIKU s , you can compute the hash h as follows:

```
h = 0
for i=0,...|s|-1
  h = (h * a + (s[i] - 'a' + 1)) % b
```

You are given two integers a and b . Construct 100 distinct HAIKUs that have the same hash.

Input

You are given two space-separated integers a and b ($b \leq 10^9$, $26 \leq a < b$).

Output

Print 100 HAIKUs with the same hash, one per line.

Example

standard input	standard output
26 52	aaz baz caz daz ... zaz aaaz abaz ... cuaz cvaz

Note

Several HAIKUs are omitted in the printed version of statements; the full version is published in the contest system.