Numbers with no forbidden prefixes P83364_en

Write a backtracking program to print all the n-digit numbers such that none of its prefixes (the whole number included) is a multiple of any of m given forbidden divisors $d_1, \ldots, d_m$.

For instance, if $n = 3$, $m = 6$ and the forbidden divisors are 2, 3, 5, 7, 11 and 19, then 137 is allowed, because none of its three prefixes 1, 13 and 137 is a multiple of any d_i. By contrast, 433 is not allowed, because some of its three prefixes 4, 43 and 433 is multiple os some d_i (4 is multiple of 2).

Input

Input consists of several cases. Each case begins with n and m, followed by m different integer numbers between 2 and 1000. You can assume $1 \leq n \leq 9$ and $1 \leq m \leq 15$.

Output

For every case, print all the numbers with exactly n digits and no forbidden prefixes, one per line and in increasing order. Print a line with 10 dashes at the end of each case.

Sample input 1

```
3 6
2 3 5 7 11 19
1 1
2
2 6
3 4 7 11 12 13
2 9
2 3 5 7 9 11 13 17 19
9 10
199 191 193 17 13 11 7 5 3 2
```

Sample output 1

```
131
137
139
173
179
----------
1
3
5
7
9
----------
10
17
19
23
25
29
50
53
58
59
----------
----------
197399999
197933933
197933993
197933999
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```

Problem information

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