Project Euler #119: Digit power sum

This problem is a programming version of Problem 119 from projecteuler.net

We shall call a positive integer "interesting" if it contains at least two digits when written in base B and is equal to the sum of its digits raised to some power.

For example, if $B = 10$, numbers $512 = (5 + 1 + 2)^3$ and $614656 = 28^4$ are "interesting".

For a given base B, find all "interesting" numbers below 10^{100}.

Input Format

The input contains one integer B.

Constraints
$2 \leq B \leq 1000$

Output Format

Print one line containing all the "interesting" numbers for base B in ascending order. The numbers should be printed in decimal numeral system.

Sample Input

```
10
```

Sample Output

```
81 512 2401 4913 5832 17576 19683 234256 390625 614656 1679616 17210368 34012224 52521875 60466176 205962976
612220032 8303765625 10460353203 24794911296 ...
```

Explanation

Only the first twenty numbers are shown in the "Sample output", the actual output contains 174 numbers.