Revision
And
Sample Questions for Practice

Special Number

Write a program that reads one integer number N and generates all possible special numbers from 1111 to 9999. To be considered special, a number must correspond to the following condition:

N to be divisible by each of its digits without reminder.

Example: upon N = 16, 2418 is a special number:

16 / 2 = 8 without reminder
16 / 4 = 4 without reminder
16 / 1 = 16 without reminder
16 / 8 = 2 without reminder

Special Number: Input & Output Data

Input Data:

The input is read from the console and consists of one integer within the range [1 … 600,000].

Output Data:

Print on the console all special numbers, separated by space.

Special Number: Test Cases

Input	Output	Explanation
3	1111 1113 1131 1133 1311 1313 1331 1333 3111 3113 3131 3133 3311 3313 3331 3333	3 / 1 = 3 without reminder 3 / 3 = 1 without reminder 3 / 3 = 1 without reminder 3 / 3 = 1 without reminder
11	1111	

Increasing 4 Numbers:

For given pair of numbers a and b generate all four number n1, n2, n3, n4, for which

$$a \le n1 < n2 < n3 < n4 \le b$$

In combinatorics such a selection of subset from given set (or range) is called "combination", so the problem is essence is to generate all combinations of 4 elements from given range of integers.

Increasing 4 Numbers:

Input Data:

The input contains two integers a and b in the range [0 … 1000], one per line.

Output Data:

The output contains all numbers in batches of four, in ascending order, one per line.

Increasing 4 Numbers: Test Cases

Input	Output

3
7
	3 4 5 6
	3 4 5 7
	3 4 6 7
	3 5 6 7
	4 5 6 7

5 7	No
10 13	10 11 12 13