

Fat number

A **fat number** is a number that the sum of its digits is equal with the multiple of its digits.

Example: 321 and 123 and 213 are **fat number** because $3 + 2 + 1 = 3 * 2 * 1$.

Your mission is finding all **fat number** in range $[a, b]$.

Input

The first line of the input consist of a single integer number t which determines the number of tests.

In each of next t lines there is two number a and b that separated by a sapce.

Constraints

- $0 < t \leq 1\ 000$
- $0 \leq a \leq b \leq 10\ 000\ 000$

Output

For each test case print out all **fat number** found inside the range which separated by a space.

Separate your answers with a new line character.

Example

Input:

```
2
8 15
2000 1
```

Output:

```
8 9
1 2 3 4 5 6 7 8 9 22 123 132 213 231 312 321 1124 1142 1214 1241 1412 1421
```