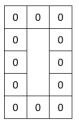
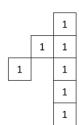


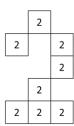
# **Problem 3 – Digits**

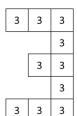
You are given a matrix of digits. The matrix contains some patterns that form digits. Your task is to find these digits and calculate their sum:

The digit patterns are as follows:

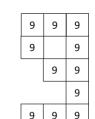




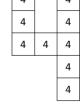












The nine-digit pattern is formed from cells with the digit nine Etc...

digit one

same digit:

The size of the patterns is constant and always has the given form.

Each digit patterns is formed by the

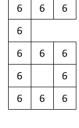
The one-digit pattern is

formed from cells with the

#### 5 5 5 5 5 5 5

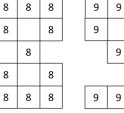
5 5 5

5





7 7 7



## **Example:**

3	2	1	1	2	3	0	1
2	1	1	9	7	6	4	0
1	4	1	7	7	7	5	1
2	4	1	4	2	7	1	1
3	4	1	4	7	1	3	1
0	4	4	4	7	4	5	1
5	8	2	4	7	3	2	1
1	2	7	4	9	2	1	8

# The digit patterns are marked in green, red and blue

Four digit patterns are found – twice one-digit, one seven-digit and one four-digit pattern.

The sum is 1 + 1 + 4 + 7 = 13

### Input

On the first line of the console you will find the number N – the number of rows and columns of the matrix

On the next N lines you will find exactly N digits, separated by a space. These are the digits of the matrix.

The input data will always be valid and in the described format. There is no need to check it explicitly.

## Output

The output data consists of a single line. It should contain the sum of all the digit patterns in the matrix



#### **Constraints**

- N will always be greater or equal to 5 and less or equal to 1250
- The values in the matrix will always be digits
- Allowed working time for your program: **0.3** seconds.
- Allowed memory: 32 MB.

# **Examples**

Input	Output	Explanation
5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	The one-patern is found three times. The sum is 1+1+1 = 3

Input	Output	Explanation
7 9 9 9 2 2 2 9 9 9 2 2 2 9 9 9 2 2 2 9 9 9 2 2 2 9 9 9 2 2 2 9 9 9 2 2 2	22	The nine-pattern is found twice and the two-pattern is also found twice. The sum is 9 + 9 + 2 + 2 = 22

Input	Output	Explanation
8 3 2 1 1 2 3 0 1 2 1 1 9 7 6 4 0 1 4 1 7 7 7 5 1 2 4 1 4 2 7 1 1 3 4 1 4 7 1 3 1 0 4 4 4 7 4 5 1 5 8 2 4 7 3 2 1 1 2 7 4 9 2 1 8	13	This is explained in the example above