

## Submissions

## Ticket Trouble

5pt	Not attempted <b>613/819 users</b> correct (75%)
10pt	Not attempted <b>565/616 users</b> correct (92%)

## Understudies

5pt	Not attempted <b>505/616 users</b> correct (82%)
15pt	Not attempted <b>440/508 users</b> correct (87%)

## Word Search

10pt	Not attempted <b>186/337 users</b> correct (55%)
15pt	Not attempted <b>20/77 users</b> correct (26%)

## Where Ya Gonna Call?

15pt	Not attempted <b>23/91 users</b> correct (25%)
25pt	Not attempted <b>3/22 users</b> correct (14%)

## Top Scores

Taube	100
ponik	75
aquannie	75
YuryBandarchuk	75
Penguinsheaven	75
Marjan0003	75
MiriTheRing	75
Celicath	60
n.bezrodnaya	60
FireJade	60

## Problem C. Word Search

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input  
10 points

Solve C-small

Large input  
15 points

Solve C-large

## Problem

In honor of Google I/O 2017, we would like to make an I/O-themed word search grid. This will be a rectangular grid in which every cell contains one of the three characters I, /, or O. The people solving our word search will look for all instances of the string I/O that appear contiguously forwards or backwards in a row, column, or diagonal. For example, the following grid contains eight instances of I/O, representing all eight possible directions in which the string can appear:

```
00000
0///0
0/I/0
0///0
00000
```

To control the difficulty level of our word search, we would like the string to appear *exactly* **N** times in the grid. Moreover, we do not want the grid to be too large; it cannot have more than **D** rows or more than **D** columns.

Can you help us design a grid that meets these specifications?

## Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case consists of one line with two integers **D** and **N**, as described above.

## Output

For each test case, first output one line containing Case #*x*:. Then output **R** lines of exactly **C** characters each, representing the rectangular grid. Each of those characters must be either I, /, or O. You may choose any values of **R** and **C** as long as both are at least 1 and neither exceeds **D**. Your grid must contain *exactly* **N** instances of the string I/O, per the rules described in the statement.

If there are multiple valid answers, you may output any of them.

## Limits

$0 \leq \mathbf{N} \leq 287$ .

It is guaranteed that at least one valid grid exists for each test case.

## Small dataset

$1 \leq \mathbf{T} \leq 25$ .

**D** = 50.

## Large dataset

$1 \leq \mathbf{T} \leq 100$ .

**D** = 15.

## Sample

```
Input      Output
4          Case #1:
50 1      0
50 0      /
50 3      I
50 8      Case #2:
          IO
          Case #3:
          III000
          /I/O/O
          III000
          Case #4:
          00000
          0///0
          0/I/O
          0///0
```

00000

The sample output displays one set of answers to the sample cases. Other answers may be possible. Note that these cases would only appear in the Small dataset.

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