

Round A China New Grad Test 2014

#### A. Read Phone Number

**B.** Rational Number Tree

C. Sorting

D. Cross the maze

E. Spaceship Defence

### **Questions asked**

# Submissions

### Read Phone Number

6pt Not attempted 1885/3058 users correct (62%)

Not attempted 1094/1837 users correct (60%)

#### Rational Number Tree

9pt | **Not attempted 1193/1545 users** correct (77%)

12pt | Not attempted **368/1037 users** correct (35%)

### Sorting

5pt Not attempted 1666/1990 users correct (84%)

8pt Not attempted 1551/1635 users correct (95%)

# Cross the maze

10pt | Not attempted 134/370 users correct (36%) |

**119/132 users** correct (90%)

# Spaceship Defence

10pt Not attempted 175/382 users correct (46%)
14pt Not attempted 106/152 users

correct (70%)

#### Top Scores 100 dreamoon 100 springegg tckwok 100 cgy4ever 100 OR.Director 100 AlanC 100 Mochavic 100 jxwuyi 100 oldherl 100 Descent 100

# Problem A. Read Phone Number

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 <u>Quick-Start Guide</u> to get started.

Small input 6 points

Solve A-small

Large input 13 points

Solve A-large

#### Problem

Do you know how to read the phone numbers in English? Now let me tell you.

For example, In China, the phone numbers are 11 digits, like: 15012233444. Someone divides the numbers into 3-4-4 format, i.e. 150 1223 3444. While someone divides the numbers into 3-3-5 format, i.e. 150 122 33444. Different formats lead to different ways to read these numbers:

150 1223 3444 reads one five zero one double two three three triple four.

150 122 33444 reads one five zero one double two double three triple four.

Here comes the problem:

Given a list of phone numbers and the dividing formats, output the right ways to read these numbers.

Rules.

Single numbers just read them separately.

2 successive numbers use double.

3 successive numbers use triple.

4 successive numbers use quadruple.

5 successive numbers use quintuple.

6 successive numbers use sextuple.

7 successive numbers use septuple.

8 successive numbers use octuple.9 successive numbers use nonuple.

10 successive numbers use decuple.

More than 10 successive numbers read them all separately.

# Input

The first line of the input gives the number of test cases,  $\mathbf{T}$ .  $\mathbf{T}$  lines|test cases follow. Each line contains a phone number  $\mathbf{N}$  and the dividing format  $\mathbf{F}$ , one or more positive integers separated by dashes (-), without leading zeros and whose sum always equals the number of digits in the phone number.

# Output

For each test case, output one line containing "Case #x: y", where x is the case number (starting from 1) and y is the reading sentence in English whose words are separated by a space.

Limits

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

Small dataset

 $1 \le$ length of N  $\le 10$ .

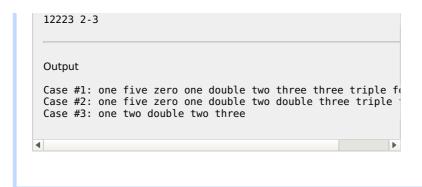
Large dataset

 $1 \le$ length of N  $\le 100$ .

Sample

# Input

3 15012233444 3-4-4 15012233444 3-3-5



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