

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%)
13pt	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%)
13pt	Not attempted 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

dreamoon	100
springegg	100
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 [Quick-Start Guide](#) 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, **T**. **T** lines|test cases follow. Each line contains a phone number **N** and the dividing format **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

$1 \leq T \leq 100$.

Small dataset

$1 \leq \text{length of } N \leq 10$.

Large dataset

$1 \leq \text{length of } N \leq 100$.

Sample

Input

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

12223 2-3

Output

Case #1: one five zero one double two three three triple f
Case #2: one five zero one double two double three triple
Case #3: one two double two three

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