**Merging and Squashing**

We have the following operations defined for two-digit numbers. There are two possible ways of merging them:

1. Merging ab and cd produces bc

* 42 merged with 17 produces 21
* 17 merged with 42 produces 74

1. Squashing ab and cd produces a(b+c)d - the middle digit is the sum of b and c

* 42 squashed with 17 produces 437
* 39 squashed with 57 produces 347 (9 + 5 = 14, we use only the 4)

You have a sequence of N two-digit numbers. Your task is to merge and squash each pair of adjacent numbers.

**Input**

All input data is read from the standard input

* On the first line, you will receive an integer N
* On the next N lines you will receive N two-digit numbers
  + Each number will be on a separate line

**Output**

The output data is printed on the standard output

* On the first output line print the merged numbers
  + There should be N - 1 of them
  + Separate them by spaces
* On the second output line print the squashed numbers
  + There should be N - 1 of them
  + Separate them by spaces

**Constraints**

* 2 <= N <= 1000
* Numbers will consist of **two non-zero digits**
* **The input data will always be correct and there is no need to check it explicitly**

**Sample Tests**

**Input**

4

12

23

34

45

**Output**

22 33 44

143 264 385

**Input**

5

11

22

11

22

11

**Output**

12 21 12 21

132 231 132 231

**Input**

11

44

69

46

63

83

13

62

14

31

68

87

**Output**

46 94 66 38 31 36 21 43 16 88

409 636 423 613 843 192 634 171 378 667