

H P C O D E W A R S X V I I

You glance into the second refreshment tent and are pleased to find fruit on the tables, but before you can grab any, you're told you must first determine the value of each fruit.

problem **15**
Fruit Math
10 points

The fruit is arranged in rows and columns, where each kind of fruit represents a unique digit between one and nine. Given sums for each row and column, determine the value for each type of fruit.

The nine fruits that can be used in each puzzle are:
Apple, Banana, Cherry, Durian, Fig, Grape, Lychee, Orange, and Pear.

Input

The first line of input indicates the size of the square fruit grid, up to a maximum of nine. Each row after that lists the fruits for a single row, followed by the sum for the row. The last line contains the sums for the columns. Please observe that extra spaces may be inserted between the items to line up the columns for visual reference. Any line might begin with a space.

```
4
  D L D L 14
  F P F D 14
  F L L P 22
  D P L L 20
8 26 16 20
```

Output

The program must print the value and name of the fruits in the puzzle in numeric order. There is only one solution.

```
1 Durian
3 Fig
6 Lychee
7 Pear
```