C - Guessing Dice

Background

Role-playing games use different dice in order to adjust the probability of events. The players know the dice they have to roll, and it is easy for them to compute the probability of a particular output or range of outputs to happen. For example, if a player rolls a six-sided dice, she knows that the probability of getting each of the numbers is one sixth.

The Problem

Your gamemaster has a more difficult task for you. She will secretly choose one of the six dice with 4, 6, 8, 10, 12, or 20 sides (as shown in the following figure), she will roll it several times, and she will just tell you the numbers.

Typical role-gaming dice set.

Your task is to write a program that, given a sequence of numbers that were the result of rolling several times the same dice, tells you what the most probable dice to be rolled is, and your probability of being right. For example, if we have a result of 17, then we are 100% sure that she used the dice of 20 sides.

The Input

The program input consists of several lines, each one representing a test with the same dice. Each line can have from 0 to 10 numbers (number of tests) and each number will represent the value obtained by the dice (from 1 to 20).

The Output

Your program must print for each line, the most probable dice (the one with less sides in case of a draw) and its probability (rounded to two decimal places).

Sample Input

```
14

4
4 1
4 1 5
4 1 5 6
4 1 5 6 11
```

Sample Output

```
20 1.00
4 0.17
4 0.32
4 0.50
6 0.56
6 0.66
12 0.93
```

Nota

En inglés, la palabra *dice* se refiere tanto al singular (dado) como al plural (dados).

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