

Michael graduated of ITESO this year and finally has a job. He's making a lot of money, but somehow never seems to have enough. Michael has decided that he needs to grab hold of his financial portfolio and solve his financing problems. The first step is to figure out what's been going on with his money.

Michael has his bank account statements and wants to see how much money he has. Help Michael by writing a program to take his closing balance from each of the past twelve months and calculate his average account balance.

Input

The first line of input contains a single integer N , ($1 \leq N \leq 100$) which is the number of datasets that follow.

Each dataset consists of twelve lines. Each line will contain the closing balance of his bank account for a particular month. Each number will be positive and displayed to the penny. No dollar sign will be included.

Output

For each dataset, you should generate one line of output with the following values: The dataset number as a decimal integer (start counting at one), a space, a character '\$', and a single number, the average (mean) of the closing balances for the twelve months. It will be rounded to the nearest penny.

Note: Used comma (,) to separate the thousands.

Sample Input

```
1
100.00
489.12
12454.12
1234.10
823.05
109.20
5.27
1542.25
839.18
83.99
1295.01
1.75
```

Sample Output

```
1 $1,581.42
```