Simple exams

Write a program that, after having requested the keyboard entry of the computer science grades of the pupils of a class by storing the data in a vector, view the average grade of the class and the percentages of grades sufficient (grade > = 6) and insufficient.

The number N of students must be entered from the keyboard. Validation of the number of students is required ($1 \le N \le 35$) and the votes entered (integer values from 1 to 10). The output must be produced in the following format:

Average rating: 6.3

Percentage of sufficient votes: 82.4% Percentage of insufficient votes: 13.6%

Input

The first line contains the N students.

The second line contains the votes of the N students.

Output

The first line contains average rating.

The second line contains percentage of sufficient votes rating.

The third line contains percentage of insufficient votes rating.

Sample input

Sample output

4 5 6 7 10	7,0 75,0% 25,0%
5 56347	5,0 40,0% 60,0%
3 10 9 5	8,0 66,7% 33,3%