Q.1 Number of Cows and Ducks

Farmer john raises cows and ducks. All the ducks in his farm has 2 legs. One day he counts the legs and eyes of all his animals and realizes that he has a total of L legs and E eyes.
Write a program to find the count of cows and ducks that Farmer John has.

Input Format:
The first line of the input consists of an integer ' L' that corresponds to the total number of legs.
The second line of the input consists of an integer 'E' that corresponds to the total number of eyes.
Assume that atleast one of the input integers will always be even.

Output Format:
Print the count of cows and ducks separated by a space.
Refer sample input and output for formatting specifications.

Sample Input1:
134
90
Sample Output1:
22 23

Sample Input2:
77
90
Sample Output2:
Number of legs should be even number

Sample Input3:
70
91
Sample Output3:
Number of eyes should be even number

Q.2 Tour expenses

'X' Persons went on a tour for 'Y' days. Each person might have spent particular amount on each day in tour. After completion of the tour you have to calculate the expenses for the below scenarios.
Scenario 1: The total expenses for the tour.
Scenario 2: What is the average amount spent for each person in tour?
Average amount spent for each person = total money spent for 'Y' days / 'X' persons
Scenario 3: How much each person have to pay out or get in?

Input Format:
The first line of the input consists of an integer D that corresponds to the number of days.

The second line of the input consists of an integer N that corresponds to the number of persons.
The next N lines consists of string, that corresponds to the name of each person. Assume that the maximum length of the input strings is 20.
The next N*D lines consists of an integer, that corresponds to the expenses on each day for each person.
[The first 'N' lines correspond to the expenses for Day 1, the next 'N' lines correspond to the expenses for Day 2 ...]

Output Format:
In the first line of the output display the total expenses for the tour.
In the second line of the output display the average amount for each person spent in tour. Display the average amount correct to 2 decimal places.
In next N lines display how much each person have to pay out or get in. If the amount he/she spent is more than the average amount, then display '+' before the amount. Else display '-' before the amount. Display the amount correct to 2 decimal places.
Refer sample input and output for formatting specifications.

Sample Input1:
2
3
Sai
Chanti
Madhu
10
20
30
10
20
30
Sample Output1:
120
40.00
Sai: -20.00
Chanti: 0.00
Madhu: +20.00

Sample Input2:
3
3
John
Joe
Chanti
20
10
30
10
30

40
20
30
40
Sample Output2:
230
76.67
John: -26.67
Joe: -6.67
Chanti: +33.33

Q.3 Gold Re-Sale

A customer buys 10K purity Yellow Gold Scrap ‘X’ Gram engagement ring set with ‘Y’ carats of diamonds/gems. Calculate the Re-Sale value for gold at 60% of spot or bid price after 3 years?
Note:
Latest price of gold per gram = Rs. 3000/-
1 carat diamonds , gems = 0.20 grams
Multiply price 10K purity per gram = 0.4167/-

Input Format:
The first line of the input consists of an integer, N that corresponds to the number of gram of gold.
The second line of the input consists of an integer, M that corresponds to the number of carats of diamonds/gems.

Output Format:
Print the final Re-Sale value for gold jewelry. Output the value correct to 2 decimal places. Refer sample input and output for formatting specifications.

Sample Input1:
3
4
Sample Output1:
1650.13

Sample Input2:
2
3
Sample Output2:
1050.08

[**Explanation for Sample Input and Output 1:**

Weight of 4 carat diamond = 4 * .20 = .80 grams

Actual gold weight: 3-.80 = 2.20 grams
Price of gold per gram for 10K purity = 3000 * .4167 =Rs.1250.1/-
Price of 2.20 grams of gold = 2.20*1250.1 = Rs.2750.22
Final resale value= 60% of 2750.22
]

Q.4 Count number of a's from repeated string

Consider a string 's', repeat the letters of the string such that the length of the newly formed string is 'n'.
Write a program to find the number of a's in that newly formed string.

Input Format:
The first line of the input consists of a string 's'. Assume that the maximum length of the string is 100.
The second line of the input consists of an integer n ($1<=n<=10^{12}$), which corresponds to the number of letters in the newly formed string.

Output Format:
Number of a's from repeated string.
Refer sample input and output for formatting specifications.

Sample Input 1:
aba
10
Sample Output 1:
7

Explanation:
The newly formed string of length 10 is abaabaabaa. The output is 7 as there are 7 a's in the newly formed string.

Q.5 Performance Survey

A survey is to be conducted among 3 dancers (with Ids 1, 2, 3 respectively) to evaluate their performances. Each candidate will be evaluated by 4 judges. Every judge must vote each candidate with a number ranging from 1 to 5 (1 as least and 5 as highest performance).
Write a program to find the dancer who scored the least and the dancer who scored the highest.

Input Format:
The first line of the input consists of 3 integers, which corresponds to the scores of 3 dancers (with Ids 1, 2, 3 respectively) by judge1.
The second line of the input consists of 3 integers, which corresponds to the scores of 3 dancers (with Ids 1, 2, 3 respectively) by judge2.

The third line of the input consists of 3 integers, which corresponds to the scores of 3 dancers (with Ids 1, 2, 3 respectively) by judge3.
The fourth line of the input consists of 3 integers, which corresponds to the scores of 3 dancers (with Ids 1, 2, 3 respectively) by judge4.

Output Format:
In the first line of the output, display the id of the dancer who scored the least. If there are multiple dancers who have scored the least, then separate it with a comma.
In the second line of the output, display the id of the dancer who scored the highest. If there are multiple dancers who have scored the highest then separate it with a comma.
In case of multiple ids to be displayed on the same line, display the ids in ascending order.
Refer sample input and output for formatting specifications.

Sample Input1:
4 1 2
5 3 4
4 5 1
2 1 3
Sample Output1:
2,3
1

Sample Input2:
1 2 3
2 4 1
3 4 1
3 2 1
Sample Output2:
3
2