[Solve any 5 problems]
[Copy will bring a zero mark]

1. Take the marks of ICS final exam of n students as input. Now find the highest scorer among them.

Input	Output
5 35 76 34 89 65 78	89

2. The CGPA of a student for past n trimesters is given. Calculate his current CGPA.

Input	Output
3 3.78 3.67 3.98	3.81

3. Using the following table, write a program that reads a code and the amount of an item. After, print the value to pay.

CODE	SPECIFICATION	PRICE
1	Cachorro Quente	R$ 4.00
2	X-Salada	R$ 4.50
3	X-Bacon	R$ 5.00
4	Torrada simples	R$ 2.00
5	Refrigerante	R$ 1.50

Input	Output
3 2 4 3 2 3	Total: R$ 10.00 Total: R$ 6.00 Total: R$ 13.50

4. The company XYZ decided to give a salary increase to its employees, according to the following table:

Salary	Readjustment Rate
0 - 400.00	15%
400.01 - 800.00	12%
800.01 - 1200.00	10%
1200.01 - 2000.00	7%
Above 2000.00	4%

Read the employee's salary, calculate and print the new employee's salary.

Input	Output
400 2000	New salary 460 New salary 2140

5. Read an integer value **X** and print the 5 consecutive even numbers from **X**, a value per line, including **X** if it is the case.

Input	Output
7	8 10 12 14 16

6. Take three integers as input and print the weighted average of it, considering that the first number has weight 2, the second number has weight 3 and the third number has weight 5.

Input	Output
6.5 4.3 6.2 5.1 4.2 8.1 8.0 9.0 10.0	5.7 6.3 9.3

7. Take two integer numbers **X** and **Y**. Print the sum of all odd values between them, not including **X** and **Y**.

Input	Output
4 5 13 10	0 11

6 4 3 3 3 5 3 4 3 8	5 0 0 0 12

8. Write a program to read the coordinates (X, Y) of an indeterminate number of points in the Cartesian system. For each point write the quadrant to which it belongs.

Input	Output
2 2 3 -2 -8 -1 -7 1	First Forth Third Second

9. Take an integer as input and print the square and cube of each number up to that number.

Input	Output
5	1 1 1 2 4 8 3 9 27 4 16 64 5 25 125

10. Take n numbers as input and try to maximize their summation.

Input	Output
5 3 -1 0 -2 2	7

11. In the current semester, you have taken X elective courses, Y core courses and Z optional courses.

The credit distribution for the courses are:

4 credits for clearing each elective course.
2 credits for clearing each core course.
No credits for clearing an optional course.
Assuming that you cleared all your courses, report the number of credits you obtain this semester.

Input	Output

6 6 5 8 7 2 9 3 8 9 2 4	36 46 42 40

12. Take 3 integer values as input. Find the value of max(A, B, C) - min(A, B, C). Here max(A, B, C) denotes the maximum value among A, B, C while min(A, B, C) denotes the minimum value among A, B, C.

Input	Output
1 3 10 5 6 7 3 8 9 2 5 6	9 2 6 4

13. Each cake consists of 4 slices. There are X friends and each friend needs exactly Y slices. Find the minimum number of cakes they should order to satisfy their appetite.

Input	Output
1 5 2 6 4 3 3 5	2 3 3 4

14. Mr. Piter is playing a video game, and is getting close to the end. He decides to finish the rest of the game in a single session.

There are X levels remaining in the game, and each level takes Piter Y minutes to complete. To protect against eye strain, Piter also decides that every time he completes 3 levels, he will take a Z minute break from playing. Note that there is no need to take this break if the game has been completed.

How much time (in minutes) will it take Piter to complete the game?

Input	Output
2 12 10 3 12 10 7 20 8 24 45 15	24 36 156 1185

15. Suppose Mr. X took an exam for 3 courses. If the average mark of any of two courses is below 35, he will fail. Determine if he will pass or fail.

Input	Output
23 47 52 28 36 80 0 100 0 35 35 35	Pass Fail Fail Pass

16. Take an integer N as input and print the sum of first N odd numbers.

Input	Output
5 6	25 36

17. In a competition called Ideal Challenge of Pure-Tea Consumers (ICPC), five contestants are handed a cup of tea each.The participants must smell, taste and assess the sample so as to identify the tea type, which can be: (1) white tea; (2) green tea; (3) black tea; or (4) herbal tea. At the end, the answers are checked to determine the number of correct guesses.
Given the actual tea type and the answers provided, determine the number of contestants who got the correct answer.

The first line contains an integer **T** representing the tea type ($1 \le$ **T** ≤ 4). The second line contains five integers **A, B, C, D** and **E**, indicating the answer given by each contestant ($1 \le$ **A, B, C, D, E** ≤ 4).

Input	Output
1 1 2 3 2 1 3 4 1 1 2 1	2 0

18. UIU wanted to select one student to participate in the OBI-Tec (Olympiad Informatics Technical Level) and represent Bangladesh in the competition, because they know that they are the best. To select the best, they have available a list of the registration number of each student and their respective notes in the discipline. Your task is to help the authority to find students better able to represent the institution and who knows guarantee your place. If the highest score is not greater than or equal to 8, you should print "Minimum note not reached" .

The first line of input contains the number of students N and then the N students bearing the registration number each, followed by the note.

Obs: the notes will not be repeated. In other words, there is no chance to have two students with the same note.

You must print the student's registration number with the highest score or "Minimum note not reached" if no student has taken a note that is greater or equal to 8.

Input	Output
3 1000 5 1001 10 1002 6	1001
4 900775 5.7 201553 7.9 5032 6.2 2088 2.1	Minimum note not reached

19. Kattapa, as you all know, was one of the greatest warriors of his time. The kingdom of Mahishmati had never lost a battle under him (as army-chief), and the reason for that was their really powerful army, also called as Mahasena.

Kattapa was known to be a very superstitious person. He believed that a soldier is "lucky" if the soldier is holding an even number of weapons, and "unlucky" otherwise. He considered the army as "READY FOR BATTLE" if the count of "lucky" soldiers is strictly greater than the count of "unlucky" soldiers, and "NOT READY" otherwise.

Given the number of weapons each soldier is holding, your task is to determine whether the army formed by all these soldiers is "READY FOR BATTLE" or "NOT READY"

Input	Output
1 1	NOT READY
1 2	READY FOR BATTLE
4 11 12 13 14	NOT READY

20. In computing, the collection of four bits is called a nibble.

Piter defines a program as:

Good, if it takes exactly X nibbles of memory, where X is a positive integer.
Not Good, otherwise.

Given a program which takes N bits of memory, determine whether it is Good or Not Good.

Input	Output
8 17 52 3	Good Not Good Good Not Good

Explanation:
Test case 1: The program requires 8 bits of memory. This is equivalent to 8/4 = 2 nibbles. Since 2 is an integer, this program is good.

Test case 2: The program requires 17 bits of memory. This is equivalent to 17/4 = 4.25 nibbles. Since 4.25 is not an integer, this program is not good.