Programming Challenge

Challenge 1

Given two natural numbers (both not greater than 200), each number in the separate line, please print the sum of them.

Example

Input:

2
3

Output:

5

Challenge 2

Read an integer X from the input and calculate the factorial of X.

- The factorial is a function that multiplies a number for each positive number that precedes it X! = X * (X-1) * (X- 2) * ... * 1

Input

- An integer number X

Output

- The factorial of X

Example

```
Input:
4

Output:
24
```

Challenge 3

In this problem, your task is to determine if a given number is a prime number or a composite number.

Input

- The first line of the input contains an integer **T** denoting the number of test cases. The description of **T** test cases follows. Each test case consists of a single line containing a single integer « n » ($2 \leq n \leq 10^9$).

Output

- For each test case, your program should output a single line containing « YES » (without quotes and spaces) if the given integer is prime or « NO » (without quotes and spaces) if the given integer is a composite number.

Example

Input:

```
6
16
127
256
513
2048
5097
```

Output:

```
NO
YES
NO
NO
NO
NO
```

Challenge 4

Input

Given a positive integer 0 < x < 50.

Output

Print one word: Wo...ow (letter o must be repeted x times).

Example 1

Input:
1

Output:
Wow

Example 2

Input:
7

Output:
Wooooooow

Challenge 5

Your program is to use the brute-force approach in order to find the Answer to Life, the Universe, and Everything. More precisely... rewrite small numbers from input to output. Stop processing input after reading in the number 42. All numbers at input are integers of one or two digits.

Each time the judge will give you a number. You should rewrite this number to standard output. If this number equals 42, after rewriting your program should terminate immediately.

Example

The example of communication.

Input:
3
15
42

Output:
3
15
42

Challenge 6

Theres a customer that always comes to a store and buys 6 diferent products, but the problem is that he always takes too much time chosing and trying the products be cause he needs that the average of the products gives an exact number.

Input

- As input it will be gived at you 6 lines with the values of each product

Output

- Your problem should give as result the average value of the total of elements.

Challenge 7

You are being given a number N . (1<=N<=10^50) . You have to print the sum of digits of that particular number .

Input

- The first line will contain T , the number of testcases (T<10) . The next T lines will contain the numbers whose sum of digits you have to calculate .

Output

- Output T lines containing the Sum of Digits of the numbers .

Example

Input:
3

123123123

3434

1234567890

Output:
18

14

45