# A: Print Them All

Time limit: 1 sec, Memory Limit: 2 MB

Do you know about integer numbers? An integer is a number that can be written without a fractional component. For example, 21, 4, 0, and -20 are integers, while 9.75, 5 1/2, and  $\sqrt{2}$  are not... You will be given two integers.

Now your task is simple that write a program that print integers between those integers including them in ascending order.

#### **Input:**

Input starts with an integer T ( $\leq$  100), denoting the number of test cases.

Then each contains an integers M and N. The task is so easy so why think about the range of M and N.

### **Output:**

For each case, you have to print integers between M and N including them in ascending order. See sample input output for better understanding.

<b>Sample Inputs:</b>	Sample Outputs:
3	
3 6	3 4 5 6
15 20	15 16 17 18 19 20
8 15	8 9 10 11 12 13 14 15

Problem Setter: Md. Gulzar Hussain

# B: Divition By 11

Time limit: 3sec, Memory Limit: 32MB

We can easily say that 11, 22, 33, 44, 55 are divisible by 11. But what about 5478, 95458485486, 53333329995? You are asked to write a program to find if the number is divisible or not. This is a simple ask for you. An integer will be given to you. You have to tell if the number is divisible by 11 or not, that's all.

#### **Input:**

Input starts with an integer T ( $\leq 10$ ), denoting the number of test cases.

Then each contains an integer N ( $-10^{51}$ <N $<10^{51}$ ).

#### **Output:**

For each case, you have to print Case #: Yes or No, here # is the case number and Yes if N is divisible by 11, No if N is not divisible by 11. See sample input output for better understanding.

### **Sample Inputs:**

3

11

420

-22

## **Sample Outputs:**

Case 1: Yes

Case 2: No

Case 3: Yes

Problem Setter:

Md. Gulzar Hussain

# C: Prime or Not

Time limit: 2 sec, Memory Limit: 2 MB

Do you know about prime numbers? A prime number is a number which has no positive divisor other than 1 and itself and is greater than 1. Here prime numbers are given less than 100.

```
2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97
```

Now your task is simple that write a program that check if a given number is prime or not.

#### **Input:**

Input starts with an integer T ( $\leq 100$ ), denoting the number of test cases.

Then each contains an integers P. Here (0<=P<10000)

#### **Output:**

For each case, you have to print Case #: "Prime" (without quotes) or "Not Prime" (without quotes), here # is the case number and "Prime" (without quotes) if P is prime or "Not Prime" (without quotes) if P is not prime. See sample input output for better understanding.

<b>Sample Inputs:</b>	Sample Outputs:
3	
3	Case 1: Prime
15	Case 2: Not Prime
83	Case 3: Prime

Problem Setter:

Md. Gulzar Hussain

# D: Triangle Wave

Time limit: 3 sec, Memory Limit: 2 MB

In this problem you are to generate a triangular wave form according to a specified pair of Amplitude and Frequency.

#### **Input:**

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs. Each input set will contain two positive integers, each on a separate line. The first integer is the Amplitude; the second integer is the Frequency.

#### **Output:**

For each test case, the output must follow the description below. The outputs of two consecutive cases will be separated by a blank line. For the output of your program, you will be printing wave forms each separated by a blank line. The total number of wave forms equals the Frequency, and the horizontal "height" of each wave equals the Amplitude. The Amplitude will never be greater than nine. The waveform itself should be filled with integers on each line which indicate the "height" of that line.

NOTE: There is a blank line after each separate waveform, excluding the last one.

<b>Sample Inputs:</b>	Sample Outputs:
1	
	1
3	22
2	333
	22
	1
	1
	22
	333
	22
	1

Problem Reference: UVa - 488 - Triangle Wave

# E: Math Is Fun 1

Time limit: 0.5 sec, Memory Limit: 1 MB

In mathematics, an equation is a statement of an equality containing one or more variables. Like

$$X - 4 = 10$$

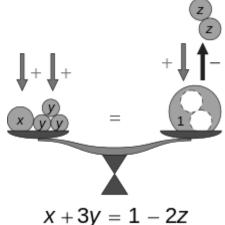
$$X + Y = 34$$

$$X - Y + Z = 22$$

Here /, \*, +, - are some arithmetic operation symbol given in operator precedence.

You don't need think about them, you already know these.

Your task is to replace the ? by the correct Mathematics symbol to make the following expression true



## Input

No input needed

## **Output**

Output the Correct expression. Please put whitespace between every character and don't forget to print a new line at the end.

Problem Setter:

Md. Gulzar Hussain