

FIRSTNAME, LASTNAME (PRINT IN UPPERCASE): KEY

STUDENT ID (e.g. 123456789):

INSTRUCTIONS:

- Write a program that will prompt for an increment value followed by another prompt for a number of terms. Assume the inputs will be integers, but if either one is less than 1, simply print Bad input. Assuming valid input, print out a triangle of integers with 10 rows. The starting integer will always be 1 and the next integer will be the previous integer plus the increment value. Once you have printed out the specified number of terms, restart the pattern. Printing out a triangle means row 1 will have 1 number, row 2 will have 2 numbers, and row n will have n numbers.

Here are 3 different sample runs (with user input in italic and output in bold just to make it easier to understand how it works).

```
Sample run #1  
Enter increment amount: 5  
Enter number of terms: 0  
Bad input
```

```
Sample run #2  
Enter increment amount: 5  
Enter number of terms: 7  
1  
6 11  
16 21 26  
31 1 6 11  
16 21 26 31 1  
6 11 16 21 26 31  
1 6 11 16 21 26 31  
1 6 11 16 21 26 31 1  
6 11 16 21 26 31 1 6 11  
16 21 26 31 1 6 11 16 21 26
```

```
Sample run #3  
Enter increment amount: 3  
Enter number of terms: 100  
1  
4 7  
10 13 16  
19 22 25 28  
31 34 37 40 43  
46 49 52 55 58 61  
64 67 70 73 76 79 82  
85 88 91 94 97 100 103 106  
109 112 115 118 121 124 127 130 133  
136 139 142 145 148 151 154 157 160 163
```

- Notice no repeats in sample run 3 since there are more terms in the sequence than number needed in a 10 row triangle.

WRITE THE CODE ON THE BACK

```

import java.util.Scanner;
public class Q2 {
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter increment amount: ");
        int inc = scanner.nextInt();

        System.out.print("Enter number of terms: ");
        int terms = scanner.nextInt();

        if (inc < 1 || terms < 1 )
        {
            System.out.print("Bad input");
        }
        else
        {

            int toPrint = 1;
            int termCount = 1;

            for(int i =1; i<=10; i++)
            {
                for(int j =1; j<=i; j++) {

                    if (termCount>terms)
                    {
                        termCount = 1; //reset counters
                        toPrint = 1;
                    }
                    System.out.print(toPrint+" ");
                    toPrint += inc;
                    termCount++;

                }
                System.out.println();

            }

            scanner.close();

        }

    }
}

```