**Right Angled Triangles-2**

**Question 1:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 5 then Print

1

3 5

7 9 11

13 15 17 19

21 23 25 27 29

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    5

Output 1:

1

3 5

7 9 11

13 15 17 19

21 23 25 27 29

Input 2  :    -4

Output 2:

Invalid Input

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int c=1;

if(n<=0)

{

System.out.print("Invalid Input");

}

else

{

for(int i=1;i<=n;i++)

{

for(int j=1;j<=n;j++)

{

if(j<=i)

{

System.out.print(c+" ");

c=c+2;

}else

{

System.out.print("");

}

}

System.out.println();

}

}

}

}

**Question 2:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 5 then Print

5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    5

Output 1:

5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

Input 2  :    -6

Output 2:

Invalid Input

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.println("Invalid Input");

}

else{

for(int i=n;i>=1;i*--)*

{

for(int j=i;j>=1;j*--)*

{

System.out.print(j+" ");

}

System.out.println();

}

}

}

}

**Question 3:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 6 then Print

1 2 3 4 5 6

5 4 3 2 1

1 2 3 4

3 2 1

1 2

1

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    6

Output 1:

1 2 3 4 5 6

5 4 3 2 1

1 2 3 4

3 2 1

1 2

1

Input 2  :    -6

Output 2:

Invalid Input

Input 3  :    5

Output 3:

1 2 3 4 5

4 3 2 1

1 2 3

2 1

1

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid Input");

}

else{

for(int i=1;i<=n;i++)

{

for(int j=1;j<=n;j++)

{

if(j<=n-i+1)

{

if(i%2==1)

{

System.out.print(j+" ");

}

else

{

System.out.print((n-i+2-j)+" ");

}

}

}

System.out.println();

}

}

}

}

**Question 3:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 6 then Print

1 2 3 4 5 6

5 4 3 2 1

1 2 3 4

3 2 1

1 2

1

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    6

Output 1:

1 2 3 4 5 6

5 4 3 2 1

1 2 3 4

3 2 1

1 2

1

Input 2  :    -6

Output 2:

Invalid Input

Input 3  :    5

Output 3:

1 2 3 4 5

4 3 2 1

1 2 3

2 1

1

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid Input");

}

else{

for(int i=1;i<=n;i++)

{

for(int j=1;j<=n;j++)

{

if(j<=n-i+1)

{

if(i%2==1)

{

System.out.print(j+" ");

}

else

{

System.out.print((n-i+2-j)+" ");

}

}

}

System.out.println();

}

}

}

}

**Question 5:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 4 and 5 then Print

5 @ 5 – odd

7 9 @ 16 – even

11 13 15 @ 39 – odd

17 19 21 23 @ 80 – even

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

                     Second Line of Input Consists of One Integer Value ( Starting Value ).

Output        :- Print the Given Pattern.

Constraints  :-  Given Row Value is Not Greater than Zero And Starting Value is Not Odd Number then Print **Invalid Inputs.**

                      Given Row Value Must be Greater than Zero or else Print **Invalid Row Value**.

                      Given Starting Vaue Must be Odd ( Either Positive or Negative ) or else Print **Invalid Starting Value**.

**Example:**

Input 1  :    4

                  5

Output 1:

5 @ 5 - Odd

7 9 @ 16 - Even

11 13 15 @ 39 - Odd

17 19 21 23 @ 80 - Even

Input 2  :   -4

                -6

Output 2:

Invalid Inputs

Input 3  :   5

                -5

Output 3:

-5 @ -5 - Odd

-3 -1 @ -4 - Even

1 3 5 @ 9 - Odd

7 9 11 13 @ 40 - Even

15 17 19 21 23 @ 95 - Odd

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int c=sc.nextInt();

if(n<=0 && c%2==0)

{

System.out.print("Invalid Inputs");

}

else if(n<=0)

{

System.out.print("Invalid Row Value");

}

else if(c%2==0)

{

System.out.print("Invalid Starting Value");

}

else

{

for(int i=1;i<=n;i++)

{

int sum=0;

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

{

sum=sum+c;

System.out.print(c+" ");

c+=2;

}

if(sum%2==0)

System.out.println("@ "+sum+" - Even");

else

System.out.println("@ "+sum+" - Odd");

}

}

}

}

**Question 6:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 5 then Print

@

# #

@ @ @

# # # # #

@ @ @ @ @

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    5

Output 1:

@

# #

@ @ @

# # # # #

@ @ @ @ @

Input 2  :    -7

Output 2:

Invalid Input

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String[] args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid Input");

}

else{

for(int i=1;i<=n;i++)

{

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

{

if(i%2==0)

{

System.out.print("# ");

}

else{

System.out.print("@ ");

}

}

System.out.println();

}

}

}

}

**Question 7:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 5 then Print

2

3 5

6 8 10

11 13 15 17

18 20 22 24 26

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- If the Given Input is equal to Zero then Print **Invalid Input**.

                      If the Given Input is Positive then Print Following Pattern.

                      If the Given Input is Negative then convert the Value to Poasitive then Print Following Pattern.

**Example:**

Input 1  :    5

Output 1:

2

3 5

6 8 10

11 13 15 17

18 20 22 24 26

Input 2  :    -3

Output 2:

2

3 5

6 8 10

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

n=Math.abs(n);

int c=2;

int num=2;

if(n==0)

{

System.out.print("Invalid Input");

}

else

{

for(int i=1;i<=n;i++)

{

for(int j=1;j<=i;)

{

if(i%2==1)

{

if(c%2==0)

{

System.out.print(c+" ");

j++;

}

}else

{

if(c%2==1)

{

System.out.print(c+" ");

j++;

}

}

c++;

}

System.out.println();

}

}

}

}

**Question 8:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 4 and 1 then Print

1 – 1

2 3 – 5

4 5 6 – 15

7 8 9 10 – 34

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

                     Second Line of Input Consists of One Integer Value ( Starting value in Pattern ).

Output        :- Print the Given Pattern.

Constraints  :- If All the Given Input Must be Greater than Zero Print Following Pattern.

                      Given Row is must be Greater then Zero or else Print **Invalid Row Input**.

                      Given Starting Value is must be Greater then Zero or else Print **Invalid Starting Value**.

                      Given Row and Starting Value is must be Greater then Zero or else Print **Invalid Inputs**.

**Example:**

Input 1  :    4

                  1

Output 1:

1 - 1

2 3 - 5

4 5 6 - 15

7 8 9 10 - 34

Input 2  :    -6

                   5

Output 2:

Invalid Rows Input

Input 3  :    4

                  -1

Output 3:

Invalid Starting Value

Input 4  :    -6

                   -2

Output 4:

Invalid Inputs

**Explanation:**

Print the Pattern If the Given Inputs are Positive.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int a=sc.nextInt();

int b=sc.nextInt();

if(a<=0 && b<=0)

{

System.out.println("Invalid Inputs");

}

else if(a<=0)

{

System.out.print("Invalid Row Input");

}

else if(b<=0)

{

System.out.println("Invalid Starting Value");

}else

{

int num=b;

for(int i=1;i<=a;i++)

{

int sum=0;

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

{

System.out.print(num+" ");

sum+=num;

num++;

}

System.out.println("- "+sum);

}

}

}

}

**Question 9:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 4 then Print

100

200 300

400 500 600

700 800 900 1000

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

Output        :- Print the Given Pattern.

Constraints  :- Given Input Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    4

Output 1:

100

200 300

400 500 600

700 800 900 1000

Input 2  :    -6

Output 2:

Invalid Input

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

if(n<=0)

{

System.out.println("Invalid Input");

}

else

{

int num=100;

for(int i=1;i<=n;i++)

{

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

{

System.out.print(num+" ");

num+=100;

}

System.out.println();

}

}

}

}

**Question 10:**

Report

**Marks: +10-0**

**Description:**

Write a Program to Print the Following Pattern?

If Input is 5 and 10 then Print

10 9 8 7 6

5 4 3 2

1 0 -1

-2 -3

-4

**Constraints:**

Input          :- First Line of Input Consists of One Integer Value ( Rows ).

                     Second Line of Input Consists of One Integer Value ( Starting value ).

Output        :- Print the Given Pattern.

Constraints  :- No of Rows Must be Greater than Zero or else Print **Invalid Input**.

**Example:**

Input 1  :    5

                  10

Output 1:

10 9 8 7 6

5 4 3 2

1 0 -1

-2 -3

-4

Input 2  :    6

                  25

Output 2:

25 24 23 22 21 20

19 18 17 16 15

14 13 12 11

10 9 8

7 6

5

**Explanation:**

Print the Following Right angle Triangle Pattern by taking Given Integer Value.

**Your Code: java**

import java.util.Scanner;

class Main

{

public static void main(String []args)

{

Scanner sc=new Scanner(System.in);

int n=sc.nextInt();

int c=sc.nextInt();

if(n<=0)

{

System.out.print("Invalid Input");

}

else

{

for(int i=n;i>=1;i*--)*

{

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

{

System.out.print(c+" ");

c*--;*

}

System.out.println();

}

}

}

}