Flowcharts and Algorithms

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\* \* \* \* \*

read

start

J=1, k=1

K=k+1

stop

Print “\*”

k<=j

J<=n

K=1,j=j+1

Print “\n”

Algorithm:

1 Start the program

2 Initialize an integer variable a=1and num

3 Ask the user to enter the number of rows they want store it in num variable.

4 repeat steps 4 to 10 until r<=num

5 initialize a variable int i=1

6 repeat the steps from 6 to 8 until i<=r

7 print \*

8 i++

9 go to next line

10 r++

11 stop

**2 .**

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Declare I,j,k,n as int

start

Input n,k=0 as int

For i<=n

i=i+1

true

j=j+1

For j<=i

false

true

Print”\*”

While k !=2\*i-1

Print”\*”

true true

Algorithm:-

1)start

2)declare the variable I,j,n,k as integers

3)input n,k as an interger

4)i = n and check i>=1

5)j = 1 and check j<=i

6)print(“\*”)

7)while k!=2 \* i-1

8)print(“\* ”)

9) n++,j++,i++

10)end

**3** \* \* \* \*

\* \* \* \*

start

\* \* \* \*

\* \* \* \*

false

Declare I,j,k,n as int

false

i=i+1

For i<=n

For j<=n

j=j+1

k+1

Print \*

Algorithm

1)start

2)declare the variable I,j,n as integers

3)input n as an interger

4)i = 0 and check i<=n

5)j=0 and check j<=n

6)print n

7) n++,j++,i++

8)end

**4 Number pattern:**

- \* \* \* \*

\* \* \*

\* \*

\*

start

Declare I,j,k,n as int

For i=>1

For j<=i

i=i+1

j=j+1

Print \*

false

false

true

true

Algorithm

1)start

2)declare the variable I,j,n as integers

3)input n as an interger

4)i = n and check i>=1

5)j = 1 and check j<=i

6)print n

7) n++,j++,i++

8)end

5 \* \* \*

\* \*

\* \* \*

start

Declare i,j,k,n as int

i=i+1

false

For i=>1

false

true

For j<=i

j=j+1

yes true

Print “ “

Print \*

If i===2& j==2

Algorithm:-

1)start

2)declare the variable I,j,n as integers

3)input n as an interger

4)i = n and check i>=1

5)j = 1 and check j<=i

6)if i==2 & j==2

7)print “ ” else goto 8th

8)print \*

8) n++,j++,i++

9)end

6.

1

1 1

1 2 1

1 3 3 1

Declare variables x,y,z,n,a,s

start

Enter the limit

S=n, x=y=0, z=s

X<=n?

no

a=1, x++

no

z<=0?

Print space

s--

no yes

Y<=x?

Print a

Print \n

A=a\*(x-y)(y+1)

Y=y+1

Algorithm

1. Start
2. Declare variables *x, y, n, a, z, s*
3. Enter the limit
4. Initialize the value of variables, s=n , x=0, y=0 , z=s
5. Do the following operations in loop
   1. x = 0 to n
   2. a= 1, x++
   3. z=s to 0
   4. print space
   5. z—-
   6. y = o to x
   7. print a
   8. a = a\*(x-y)/(y+1)
   9. y= y+1
   10. go to next line
6. Repeat the process to n
7. Print the final required triangle
8. Stop