

Print n natural numbers and their quadratic

1. Start
2. Input n
3. for  $i = 1$  to  $n+1$  Step 1  
Print ( $i, i * i$ )
4. stop

Print N odd numbers.

1. start
2. input N
3. for  $i = 1$  to  $n+1$  step 2  
Print ( $i$ )
4. Print "Over"
5. stop

Print n even numbers

1. start
2. input n
3. for  $i = 2$  to  $n+1$  step 2  
Print ( $i$ )
4. Print "done"
5. stop

Sum of any n numbers.

1. start
2. input n
3. sum = 0
4. for  $i = 1$  to n  
{  
input = "any number", n  
sum = sum + n  
}

5. Print sum
6. stop

11.

Algorithm to find the factorial of a given number.

$1! = 1$   
 $2! = 2 * 1 = 2$   
 $3! = 3 * 2 * 1 = 6$   
 $4! = 4 * 3 * 2 * 1 = 24$   
 $5! = 5 * 4 * 3 * 2 * 1 = 120$

1. Start
2. fact = 1
3. input "factorial of which number?", n  
 $fact = fact * i$

4. Print fact
5. stop  
 $n = 4$  fact = 1  
 $i = 1$  fact = 1  
 $i = 2$  fact = 2  
 $i = 3$  fact = 6  
 $i = 4$  fact = 24

12. Algorithm to print the multiplication table.

$1 * 2 = 2$   
 $2 * 2 = 4$   
 $3 * 2 = 6$   
 $4 * 2 = 8$   
 $5 * 2 = 10$   
 $6 * 2 = 12$   
 $7 * 2 = 14$   
 $8 * 2 = 16$   
 $9 * 2 = 18$   
 $10 * 2 = 20$

1. Start
2. input "Number of rows",  $n$
3. input "multiplication table of which number",  $m$
4. for  $i = 1$  to  $n+1$
- print ( $i$ , ' ',  $m$ , '= ',  $i * m$ )
5. stop

$n$	$i$	$m$	$i * m$
5	1	* 4	= 4
	2	* 4	= 8
	3	* 4	= 12
	4	* 4	= 16
	5	* 4	= 20

13. Algorithm to check whether a given number is prime or not.

1. Start
2. input "Enter a number",  $n$
3. flag = 0
3. for  $i = 2$  to  $n$

    if ( $n \% i == 0$ )

        { flag = 1

        break

    }

4. if (flag == 0):

    prime("prime")

else

    print ("not prime")

5. stop.

while loop

Another name

do-while loop

while loop

Body

{

next st

Example

For  $i =$

Print

$i = 1$

while

{

while loop.

Another iterative statement similar to for loop is while loop

Syntax is

while (expression)

{  
Body of loop

}

next stmt

Example

For i = 1 to 10

Print(i)

i = 1

while (i < 10)

{

Print(i)

i = i + 1

}

Print("over")