1.print sum=1x+2x+3x+…..

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int i,n, sum=0;

int X=5;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

{

sum=sum+(i\*X);

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:75

2.print sum=1!+2!+3!+……n!

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int i,n,j,sum=0,f1=1;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

{

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

{

f1=f1\*j;

}

sum=sum+f1;

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:34863

3.print sum=x^1+x^2+x^3+……x^n.

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int i,n,j,sum=0,f1=1;

int x=3;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

{

f1=1;

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

{

f1=f1\*x;

}

sum=sum+f1;

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:363

4.print sum=1+3+5+….+n.

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int i,n,j,sum=0,k=1;

int x=3;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

{

sum=sum+(k+x);

k=k+2;

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:40

5. print sum=1.0+1.1+1.2+…..

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n;

double sum=0.0;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

for (double i = 1.0; i <= n; i += 0.1) {

sum += i;

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:123.00000000000004

6.print sum=1/2+3/4+5/6+…..

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,j,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

double sum=0.0;

for ( i = 1; i <= n; i += 2) {

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

sum += (double) i / j;

}

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

6

sum is:2.0833333333333335

7.print sum=1+4+9+……

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,sum=0,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

sum =sum+(i\*i);

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:55

8.print sum=1+8+27+…

import java.util.\*;

public class Main

{

public static void main(String[] args) {

int n,sum=0,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the number:");

n=sc.nextInt();

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

sum =sum+(i\*i\*i);

}

System.out.println("sum is:"+sum);

}

}

Output:

enter the number:

5

sum is:225

9. print sum=x^1/1!+ x^2/2!+ x^3/3!+……n

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of x: ");

double x = scanner.nextDouble();

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

double sum = 0.0;

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

double term = 1.0;

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

term \*= x / j;

}

sum += term;

}

System.out.println("The sum of the series is: " + sum);

}

}

Output:

Enter the value of x: 5

Enter the value of n: 5

The sum of the series is: 90.41666666666667

10.print sum=1!/1+2!/2+3!/3+…..n

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

double sum = 0.0;

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

int factorial = 1;

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

factorial \*= j;

}

sum += (double) factorial \* i / i;

}

System.out.println("The sum of the series is: " + sum);

}

}

Output:

Enter the value of n: 5

The sum of the series is: 153.0

11. print sum=1^1+2^2+3^3+……

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

int sum = 0;

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

double f1 = 1;

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

f1 \*= i;

}

sum += f1;

}

System.out.println("The sum of the series is: " + sum);

}

}

Output:

Enter the value of n: 5

The sum of the series is: 3413

12. print sum=1/1+1/3+1/5+….

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

double sum = 0.0;

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

for (int j = 1; j <= i; j += 2) {

if (i == j) {

sum += 1.0 / i;

}

}

}

System.out.println("The sum of the series is: "+ sum);

}

}

Output:

Enter the value of n: 20

The sum of the series is: 2.13

13. print sum=1-x^2/2!+ x^4/4!+ x^6/6!+….+ x^n/n!

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n and x: ");

int n = scanner.nextInt();

int x = scanner.nextInt();

double sum = 1.0;

double f1 = 1.0;

for (int k = 1; k <= n; k++) {

f1 \*= -1 \* (x \* x) / (2 \* k \* (2 \* k - 1));

sum += f1;

}

System.out.printf("The sum of the series is: %.2f%n", sum);

}

}

Output:

Enter the value of n and x: 10

5

The sum of the series is: 13.00

14. print sum=1-x^3/3!+ x^5/5!+ x^7/7!+….+ x^n/n!

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n and x: ");

int n = scanner.nextInt();

int x = scanner.nextInt();

double sum = 0.0;

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

double term = 1.0;

for (int j = 1; j <= 2\*i-1; j++) {

term \*= x / j;

}

if (i % 2 == 0) {

sum -= term;

} else {

sum += term;

}

}

System.out.println("Sum = " + sum);

}

}

Output:

Enter the value of n and x: 3

7

Sum = 7.0

15. write a java program to print print sum=1-x^3/3!+ x^5/5!+ x^7/7!+….+ x^n/n! using nested for loop use only one method

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the value of n: ");

int n = scanner.nextInt();

double x = 2.0;

double sum = 0.0;

for (int i = 2; i <= n; i += 2) {

double numerator = Math.pow(x, i);

double denominator = Math.pow(2, i) \* factorial(1);

sum += numerator / denominator;

}

System.out.println("The sum of the series is:"+ sum);

}

public static int factorial(int num) {

if (num == 0 || num == 1) {

return 1;

}

int fact = 1;

for (int i = 2; i <= num; i++) {

fact \*= i;

}

return fact;

}

}

Output:

Enter the value of n: 9

The sum of the series is:4.0