Write a function to calculate LCM of two numbers. (TSRS)

```c
#include<stdio.h>
int lcm(int,int);
int main()
{
   int a,b;
   printf("Enter a number = ");
   scanf("%d",&a);
   printf("Enter a number = ");
   scanf("%d",&b);
   int res= lcm(a,b);
   printf("LCM of two numbers = %d",res);
   printf("\n");
   return 0;
}
int lcm(int a, int b)
{
    for(int i=2; i<=a*b; i++)
    {
        if(i%a==0 && i%b==0)
        return i;
        else
        continue;
    }
}
```

Write a function to calculate HCF of two numbers. (TSRS)

```c
#include<stdio.h>
int hcf(int,int);
int main()
{
   int a,b;
   printf("Enter a number = ");
   scanf("%d",&a);
   printf("Enter a number = ");
   scanf("%d",&b);
   int res= hcf(a,b);
   printf("HCF of two numbers = %d",res);
   printf("\n");
   return 0;
}
int hcf(int a, int b)
{   int max= a>b?a:b ;
    for(int i=max; i>=1; i--)
    {
        if(a%i==0 && b%i==0)
        return i;
        else
```

```
        continue;
    }
}
```

Write a function to check whether a given number is Prime or not. (TSRS)

```
#include<stdio.h>
int isPrime(int);
int main()
{
   int n;
   printf("Enter a number = ");
   scanf("%d",&n);
   int res= isPrime(n);
   if(res==1)
   printf("\nNot a prime number ");
   else
   printf("\nprime number ");
   printf("\n");
   return 0;
}
int isPrime(int n)
{
    int flag=0;
    for(int i=2; i<=n/2; i++)
    {
        if(n%i==0)
        {
            flag=1;
            break;
        }
    }
    if(flag==1)
    return 1;
    else
    return 0;
}
```

Write a function to find the next prime number of a given number. (TSRS)

```
#include<stdio.h>
int nextPrime(int);
int main()
{
   int n;
   printf("Enter a number = ");
   scanf("%d",&n);
   int res= nextPrime(n);
```

```
   printf("\nNext prime number is %d",res);
   printf("\n");
   return 0;
}
int nextPrime(int n)
{
    int flag=0;
    int a=0;
    int k=n+1;
    for(int i=n+1; i==k; i++)
    {
        int j=2;
        while(j<=(i/2))
        {
            if(i%j==0)
            {
                flag=1;
                ++k;
                break;
            }
            j++;
            a=i;
        }


    }
    return a;
}
```

Write a function to print first N prime numbers (TSRN)

```
#include<stdio.h>
void printPrime(int);
int main()
{
   int n;
   printf("Enter a number = ");
   scanf("%d",&n);
   printPrime(n);
   printf("\n");
   return 0;
}
void printPrime(int n)
{
    int flag=0, count=0;
    for(int i=2; i!=0; i++)
    {
        flag=0;
        for(int j=2; j<=i/2; j++)
        {
```

```
            if(i%j==0)
            {
                flag=1;
                break;
            }
        }
        if(flag==0)
        {   printf("%d ",i);
            count++;
            if(count==n)
            {
                break;
            }
        }
    }
}
```

Write a function to print all Prime numbers between two given numbers. (TSRN)

```
#include<stdio.h>
void printPrime(int,int);
int main()
{
   int a,b;
   printf("Enter a number = ");
   scanf("%d",&a);
   printf("Enter a number = ");
   scanf("%d",&b);
   printPrime(a,b);
   printf("\n");
   return 0;
}
void printPrime(int a, int b)
{

    int flag=0;
    for(int i= a+1; i<b; i++)
    {
        flag=0;
        for(int j=2; j<=i/2; j++)
        {
            if(i%j==0)
            {
                flag=1;
                break;
            }
        }
        if(flag==0){
```

```
            printf("%d ",i);
        }
    }
}
```

Write a function to print first N terms of Fibonacci series (TSRN)

```
#include<stdio.h>
void fibonacci(int);
int main()
{
   int a;
   printf("Enter a number = ");
   scanf("%d",&a);

   fibonacci(a);
   printf("\n");
   return 0;
}
void fibonacci(int n)
{
    int prev=0, next=1, sum=0;
    printf("%d %d ",prev,next);
    for(int i=1; i<=n-2; i++)
    {
        sum= prev+next;
        printf("%d ",sum);
        prev=next;
        next=sum;
    }
}
```

Write a function to print PASCAL Triangle. (TSRN)

```
#include<stdio.h>
int fact(int);
int comb(int,int);
void pascal(int);
int main()
{
   int a,b;
   printf("Enter value of n = ");
   scanf("%d",&a);
   pascal(a);
   printf("\n");
   return 0;
}
int fact(int n)
{
    int fact=1;
```

```
    for(int i=2; i<=n; i++)
       fact = fact*i;
    return fact;
}
int comb(int n, int r)
{
    return (fact(n)/(fact(r)*fact(n-r)));
}
void pascal(int n)
{
    for(int i=0; i<=n; i++)
    {

        for(int j=0; j<=i; j++)
            printf(" %d ", comb(i,j));

        printf("\n");
    }
}
```

Write a program in C to find the square of any number using the function.

```
#include<stdio.h>
int square(int);
int main()
{
   int a;
   printf("Enter a number = ");
   scanf("%d",&a);

   int res= square(a);
   printf("Square of a number is %d", res);
   printf("\n");
   return 0;
}
int square(int n)
{
    return n*n;
}
```

Write a program in C to find the sum of the series 1! /1+2!/2+3!/3+4!/4+5!/5 using the

function.

```c
#include<stdio.h>
int fact(int);
int main()
{
   int sum=0;
   for(int i=1; i<=5; i++)
   {
    sum= sum+ ((fact(i))/i);
   }
   printf(" Sum of series = %d",sum);
   printf("\n");
   return 0;
}
int fact(int n)
{
    int fact=1;
    for(int i=2; i<=n; i++)
       fact = fact*i;
    return fact;
}
```