1.Write a recursive function to calculate sum of first N natural numbers.

#include<stdio.h>

int sum(int n)

{

   int s=0;

   if(n==0)

     return s;

   s=n+sum(n-1);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",sum(x));

}

2. Write a recursive function to calculate sum of first N odd natural numbers.

#include<stdio.h>

int sum(int n)

{

   int s=0;

   if(n==0)

     return s;

   s=2\*n-1+sum(n-1);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",sum(x));

}

3. Write a recursive function to calculate sum of first N odd natural numbers.

#include<stdio.h>

int sum(int n)

{

   int s=0;

   if(n==0)

     return s;

   s=2\*n-1+sum(n-1);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",sum(x));

}

4. Write a recursive function to calculate sum of squares of first n natural numbers.

#include<stdio.h>

int sum(int n)

{

   int s=0;

   if(n==0)

     return s;

   s=n\*n+sum(n-1);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",sum(x));

}

5. Write a recursive function to calculate sum of digits of a given number.

#include<stdio.h>

int sum(int n)

{

   int s=0;

   if(n==0)

    return s;

   s=(n%10) + sum(n/10);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",sum(x));

}

6. Write a recursive function to calculate factorial of a given number.

#include<stdio.h>

int fact(int n)

{

  int f=1;

   if(n==0)

    return f;

   f=n \* fact(n-1);

}

int main()

{

   int  x;

   printf("Enter a number: ");

   scanf("%d",&x);

   printf("%d ",fact(x));

}

7. Write a recursive function to calculate HCF of two numbers.

8.

9. Write a program in C to count the digits of a given number using recursion.