Write C program to read in two numbers, x and n, and then compute the sum of this geometric progression:

1+x+x2+x3+x4+……….+xn

Print x, n, the sum

Perform error checking. For example, the formula does not make sense for negative exponents- if n is less than 0. Have your program print an error message if n<0, then go back and read in the next pair of numbers of without computing the sum. Are any values of x also illegal? If so, test for them too.

Program:

#include <stdio.h>

#include <conio.h>

#include <math.h>

main()

{

int x,n,sum=0,i;

start:

clrscr();

printf("enter the values for x and n");

scanf("%d%d",&x,&n);

if(n>0)

{

for(i=0;i<=n;i++)

{

sum = sum+pow(x,i);

}

printf(“ x is - %d, n is -%d \n”,x,n);

printf("The sum of the geometric progression is:%d",sum);

}

else

{

printf("not a valid n:%d value",n);

getch();

goto start;

}

}

Result:

Enter the values for x and n 1 1

The sum of the geometric progression: 2