```c
#include<stdio.h>
#include<math.h>
float g(float x);
main()
{
float f,q,b,h,sum;
int n,i,r,R=3;
q=(2+R)/10;
b=4;
printf("Enter the number of intervals \n");
scanf("%d",&n);
h=(b-q)/n;
sum=0.0;
for(i=0;i<=n-2;i=i+2)
{
sum=sum+(h/3.0)*(g(q+i*h)+4*g(q+(i+1)*h)+g(q+(i+2)*h));
}
printf("The value of the integral correct upto 5 decimal places = %7.5f",sum);
return(0);
}
float g(float x)
{
float f,y;
int r;
r=3;
f=(2+r)/10;
y=(f+2*pow(x,2)+pow(x,3))/(1+x*cosh(x+1));
return y;
}
//*output*//
Enter the number of intervals
12
The value of the integral correct upto 5 decimal places = 2.12480
```