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#include<stdio.h>
#include<math.h>
float f(float x);
int main()
{
float pi,a,c,h,sum,b;
int n,i,r;
pi=4*atan(1);
a=pi/36;
c=pi/9;
n=13;
h=(c-a)/(n-1);
sum=0;
for(i=0;i<=n-6;i=i+6)
{
sum=sum+(3.*h/10.)*(f(a+i*h)+5*f(a+(i+1)*h)+f(a+(i+2)*h)+6*f(a+(i+3)*h)+f(a+(i+4)*h)+5*f(a+(i+5)*h)
}
printf("The value of the integral correct up to 5D places = %7.5f",sum);
return(0);
}
float f(float x)
{
float y,b;
int r;
r=0;
b=0.1+(r/10.);
y=(pow(x,3)+cos(b*x))/sqrt((pow(cos(x),4))+(b*pow(sin(x),4)));
return(y);
}

```

\\output\\

The value of the integral correct up to 5D places = 0.28036