```c
#include<stdio.h>
#include<math.h>
float f(float x);
int main()
{
float a,b,x,error=1e-6;
printf("\n enter the end point of interval\n");
scanf("%f%f",&a,&b);
if(f(a)*f(b)>0)
{
printf("change the initial interval");
}
else
{
while(fabs(b-a)>error && f(a)!=0 && f(b)!=0)
{
x=(a+b)/2.;
if(f(a)*f(x)<0)
b=x;
else
a=x;
}
if(f(a)==0)
printf("\n the root is %8.5f (correct upto 5D)",a);
else if (f(b)==0)
printf("\n the root is %8.5f (correct upto 5D)",b);
else
printf("\n the root is %8.5f (correct upto 5D)",x);
return(0);
}
}
float f(float x)
{
    float y,p;
    int r=3;
    p=1.5+(r/20.);
    y=3*pow(2-(p*x),2)+x*cos(2+(p*x))-2;
    return(y);
}
//*Output*//
 enter the end point of interval
0
1

 the root is  0.64344 (correct upto 5D)
```