```c
#include<stdio.h>
#include<math.h>
float f(float x);
int main()
{
    float a,b,x1,x0,error=1e-7,p;
    int r;
    printf("\n Enter the end points of the interval\n");
    scanf("%f%f",&a,&b);
    if(f(a)*f(b)>0)
    {
        printf("change the initial interval\n");

    }
    else
    {
        x0=a+(b-a)*fabs(f(a))/(fabs(f(a))+fabs(f(b)));
        do
        {
            if((f(a)*f(x0))<0)
            b=x0;
            else
            a=x0;
            x1=x0;
            x0=a+(b-a)*fabs(f(a))/(fabs(f(a))+fabs(f(b)));
        }
        while(fabs(x1-x0)>error);
        printf("\n The root is %8.5f(correct up to five places of decimal)",x0);
    }

}
float f(float x)
{
    float y,p;
    int r=3;
    p=1+(r+25)/50.;
    y=2*pow(x,p+x)+cos(p*x)-p;
    return y;
}
//*Output*//
 Enter the end points of the interval
0
1

 The root is  0.83319(correct up to five places of decimal)
```