

```
#include <bits/stdc++.h>
```

```
#include <math.h>
```

```
using namespace std;
```

```
double error = 0.0001;
```

```
double f(double x)
```

```
{
```

```
    return pow(x, 3) - x - 1;
```

```
}
```

```
int horner(int poly[], int n, int x)
```

```
{
```

```
    int result = poly[0];
```

```
    for (int i=1; i<n; i++)
```

```
        result = result*x + poly[i];
```

```
    return result;
```

```
}
```

```
void bisection(double a, double b)
```

```
{
```

```
    double x,x1=a;
```

```
    int i = 1;
```

```
    while(1)
```

```
{
```

```
    x = (a + b) / 2;
```

```

    if(f(x) == 0)
        break;
    if(fabs((x-x1))<error){
        break;
    }
    if(f(a) * f(x) < 0)
        b = x;
    else a = x;
    x1=x;
    i++;
}
Cout<< x<<endl;
}

int main()
{
    double upBounf,lowBound;

    cout<<"Enter the value of xLower: ";
    cin>>lowBound;
    cout<<"Enter the value of xUpper: ";
    cin>>upBounf;

    bisection (lowBound,upBounf);
    return 0;
}

```