Answer on Question #46917, Programming, C++

Problem.

write program for the bisection method using c++ f(x)=x2+2x-5

Solution.

Code

```cpp
#include <iostream>
#include <cmath>
using namespace std;

// The function
float f(float x) {
    return x * x + 2 * x - 5;
}

int main() {
    float a;
    float b;

    // Input
    cout << "Enter a = ";
    cin >> a;
    cout << "Enter b = ";
    cin >> b;
    float c = (a + b) / 2;

    // Iteration loop
    while (((b - a) > 0.0001) && (abs(f(c)) > 0.0001)) {
        c = (a + b) / 2;
        if (f(a) * f(c) < 0) {
            b = c;
        }
        if (f(b) * f(c) < 0) {
            a = c;
        }
    }

    // Output
    cout << "Root: " << c;
}
```

Result

```
Enter a = -1
Enter b = 10
Root: 1.44947
```