

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

//Function prototypes
float f(float x);
float secant(float a, float b);

int main()
{
    float a, b, root;

    printf("Enter a: ");
    scanf("%f", &a);
    printf("Enter b: ");
    scanf("%f", &b);

    root = secant(a, b);

    printf("Root of the equation is %f\n", root);

    exit (0);
}

float f(float x)
{
    float ans;

    ans = x*x + 5*x + 2;

    //Checking if result is NAN
    if (ans != ans)
    {
        printf("Cannot proceed further...Try changing the interval\n");
        exit (2);
    }

    return ans;
}

float secant(float a, float b)
{
    float c;

    while (1)
    {
        c = (a*f(b) - b*f(a))/(f(b) - f(a));

        if(f(c) == (float)0)
        {
            return c;
        }

        if(b == c)
        {
            return c;
        }
        a = b;
        b = c;
    }
}
```