#include <stdio.h>

#include <math.h>

double f(double x) {

return 6 \* x \* x + 11 \* x - 35;

}

int main() {

double c = 0, x0, x1;

// calculating tolerance

int noDigits = 4;

double t = 0.5 \* pow(10.0, -noDigits);

x0 = 0;

x1 = 0;

// input range

while (f(x0) \* f(x1) > 0 || x0 == x1) {

printf("Enter a valid range:: ");

scanf("%lf %lf", &x0, &x1);

}

double x\_prev = 0;

printf("x0\t| c\t| x1\t| f(c)\n");

while (1) {

x\_prev = c;

c = (x0 \* f(x1) - x1 \* f(x0)) / (f(x1) - f(x0));

printf("%lf\t| %lf\t| %lf\t| %lf\n", x0, c, x1, f(c));

if (f(c) == 0) {

printf("Result is :: %lf", c);

break;

} else if (f(x0) \* f(c) < 0) {

x1 = c;

} else {

x0 = c;

}

if (fabs(c - x\_prev) < t) {

printf("Result is :: %lf within %lf tolerance", c, t);

break;

}

}

return 0;

}