

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

typedef struct polynomial{
    int *coeff;
}poly;

double value(poly p, double x, int degree){
    double xpow = 1.0, ans = 0.0;
    for(int i = 0; i <= degree; i++){
        ans += xpow * p.coeff[i];
        xpow *= x;
    }
    return ans;
}

int main(){
    int n;
    double eps, oldroot, g;
    scanf("%d %lf", &n, &eps);
    poly p[2];
    p[0].coeff = (int*)calloc(n+1, sizeof(int));
    p[1].coeff = (int*)calloc(n, sizeof(int));

    for(int i = 0; i <= n; i++)
        scanf("%d", &p[0].coeff[i]);

    // The derivative polynomial
    for(int i = 0; i < n; i++)
        p[1].coeff[i] = (i+1)*p[0].coeff[i+1];

    scanf("%lf", &g);
    while(1){
        oldroot = g;
        double nr = value(p[0], oldroot, n);
        double dr = value(p[1], oldroot, n-1); // Careful about degree
        g = oldroot - nr/dr;
        if(fabs(oldroot - g) < eps) // Close enough!
            break;
    }
    printf("%.21f", g);
    return 0;
}
```