python：

def LGLR（x1,y1,x2）：

n＝len(x1)

z＝0

for i in range(n):

xi,yi＝x[i],y[i]

p＝1

for j in range(n)：

if i＝＝j：

xj＝x[j]

p\*＝(x2-xj)/(xi-xj)

z＋＝yi\*p

return z

y2=LGLR（x1,y1,x2）

print("拉格朗日插值多项式结果为:"y2)

c语言：

#include <stdio.h>

#define MAXN 1010

double x[MAXN], y[MAXN];

double Lagrange(int n, double \*x, double \*y, double xp)

{

double sum = 0, mul = 1;

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

{

mul = y[i];

for (int j = 1; j <= n; ++j)

{

if (i == j) continue;

mul \*= (xp - x[j]) / (x[i] - x[j]);

}

sum += mul;

}

return sum;

}

int main()

{

int n;

printf("数据点的个数n：\n");

scanf("%d", &n);

printf("x和y：\n");

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

scanf("%lf%lf", &x[i], &y[i]);

double result;

printf("待求点的值：\n");

scanf("%lf", &result);

double res = Lagrange(n, x, y, result);

printf("在x=%g处的函数值为%f\n", result, res);

return 0;

}