

```

1  #include<bits/stdc++.h>
2
3  using namespace std;
4
5  struct Point{
6      double x,y;
7      Point(double x=0,double y=0):x(x),y(y){}
8  };
9
10 const double eps = 1e-10;
11
12 typedef Point Vector;
13
14 Vector operator + (Vector A,Vector B){ return Vector(A.x+B.x,A.y+B.y); }
15 Vector operator - (Vector A,Vector B){ return Vector(A.x-B.x,A.y-B.y); }
16 Vector operator * (Vector A,double p){ return Vector(A.x*p,A.y*p); }
17 Vector operator / (Vector A,double p){ return Vector(A.x/p,A.y/p); }
18
19 bool operator < (const Point &a,const Point &b){
20     return a.x < b.x || (a.x == b.x && a.y < b.y);
21 }
22
23 int dcmp(double x){
24     if( fabs(x) < eps ) return 0;
25     else return x < 0 ? -1 : 1;
26 }
27
28 bool operator == (const Point &a,const Point &b){
29     return dcmp(a.x-b.x) == 0 && dcmp(a.y-b.y) == 0;
30 }
31
32 double Cross(Vector A,Vector B){ return A.x*B.y - A.y*B.x; }
33
34 double Len(Point a,Point b){ return sqrt( (a.x-b.x)*(a.x-b.x) + (a.y-b.y)*
(a.y-b.y) ); }
35
36 // 围成凸包的点在 ch 里面
37
38 void ConvexHull(Point *p,int n,Point *ch){
39     sort(p,p+n);
40     int m = 0;
41     for(int i=0;i<n;i++){
42         {
43             while( m > 1 && Cross(ch[m-1]-ch[m-2],p[i]-ch[m-2]) <= 0 ) m--;
44             ch[m++] = p[i];
45         }
46         int k = m;
47         for(int i=n-2;i>=0;i--){
48             {
49                 while( m > k && Cross(ch[m-1]-ch[m-2],p[i]-ch[m-2]) <= 0 ) m--;
50                 ch[m++] = p[i];
51             }
52             if( n > 1 ) m--;
53             double Ans = 0;
54             for(int i=1;i<m;i++){

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55     Ans += Len(ch[i],ch[i-1]);
56     Ans += Len(ch[0],ch[m-1]);
57     printf("%.2f",Ans);
58 }
59
60 void read(int &p){
61     int t=0;
62     char c;
63     c=getchar();
64     while( c < '0' || c > '9' )
65         c=getchar();
66     while( c >= '0' && c <= '9' )
67     {
68         t=t*10+c-'0';
69         c=getchar();
70     }
71     p = t;
72 }
73
74 Point p[10010],ans[10010];
75
76 int main(int argc,char ** argv){
77     int n;
78     read(n);
79     for(int i=0;i<n;i++)
80     {
81         int x,y;
82         read(x);
83         read(y);
84         p[i].x = x;
85         p[i].y = y;
86     }
87     ConvexHull(p,n,ans);
88     return 0;
89 }

```