

```

0  import rhinoscriptsyntax as rs
1  def Main():
2      Pt = {}
3      Distance = []
4      squknot = {}
5      SQCurve = []
6      ISuqKnot = []
7      JSuqKnot = []
8      Clovknot = {}
9      IClovknot = []
10     JClovknot = []
11     DistClovknot = {}
12     TestPt = rs.GetObject("select test point", rs.filter.point)
13
14     for i in range(15):
15         for j in range(15):
16             x = i*2
17             y = j*3
18             z=0
19             Pt[(i,j)] = (x,y,z)
20
21     for i in range (15):
22         for j in range(15):
23             if i-1>0:
24                 Distance = rs.Distance( Pt[(i,j)], Pt[(i-1),j] )
25                 if Distance >1:
26                     Clovknot[(i,j)] = Pt[(i,j)]
27                     IClovknot.append(i)
28                     JClovknot.append(j)
29                     DistClovknot[(i,j)] = rs.Distance(Clovknot[(i,j)], TestPt
    )
30
31     IMAXClovknot = max(IClovknot)
32     IMIMClovknot = min(IClovknot)
33     JMAXClovknot = max(JClovknot)
34     JMIMClovknot = min(JClovknot)
35
36     #get the index of the smallest value
37     DistClovknotLIST = zip(DistClovknot.values(),DistClovknot.keys())
38     DistClovknotLIST.sort()
39     #the I and J value of the distance,
40     ClosestPtIJ = DistClovknotLIST[0][1]
41
42     CLOVECurve = CLOVKNOT(Clovknot,ClosestPtIJ,IClovknot,JClovknot,IMAXClovknot
    ,IMIMClovknot,JMAXClovknot,JMIMClovknot)
43
44
45     def CLOVKNOT(POINT,CLOSTPT,ICLOVknot,JCLOVknot,IMAX,IMIM,JMAX,JMIM):
46         # get the I,J value of the startpoint
47         i = CLOSTPT[0]
48         j = CLOSTPT[1]
49         Curve = []
50         if i >= IMIM and j >= JMIM and i <= IMAX and j<= JMAX:
51
52             if i-1 in ICLOVknot and j-1 in JCLOVknot:
53                 NewPtIJ2 = (i-1,j-1)
54                 Curve.append(rs.AddLine( POINT[(i,j)],POINT[(i-1,j-1)] ))

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```
55             CLOVKNOT(POINT,NewPtIJ2,ICLOVknot,JCLOVknot,IMAX,IMIM,JMAX,JMIM)  
56  
57             if i+1 in ICLOVknot and j+1 in JCLOVknot:  
58                 NewPtIJ = (i+1,j+1)  
59                 Curve.append(rs.AddLine( POINT[(i,j)],POINT[(i+1,j+1)] ))  
60                 CLOVKNOT(POINT,NewPtIJ,ICLOVknot,JCLOVknot,IMAX,IMIM,JMAX,JMIM)  
61  
62  
63     Main()
```