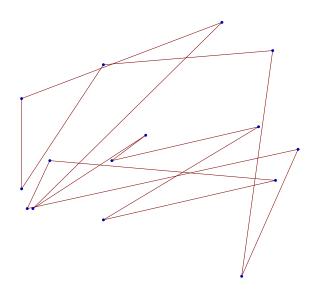
## Força Bruta com 15 vértices:

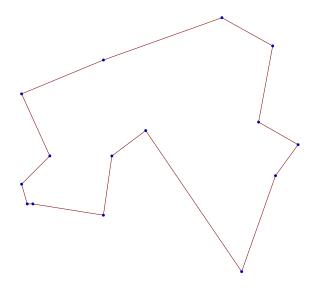
```
Start | 885.075 | :
```

```
GraphPlot[{0 -> 1, 1 -> 2, 2 -> 3, 3 -> 4, 4 -> 5, 5 -> 6, 6 -> 7, 7 -> 8, 8 -> 9, 9 -> 10, 10 -> 11, 11 -> 12, 12 -> 13, 13 -> 14, 14 -> 0}, VertexCoordinateRules -> {0 -> {73, 91}, 1 -> {6, 25}, 2 -> {46, 51}, 3 -> {34, 42}, 4 -> {86, 54}, 5 -> {31, 21}, 6 -> {92, 35}, 7 -> {12, 42}, 8 -> {4, 25}, 9 -> {100, 46}, 10 -> {80, 1}, 11 -> {91, 81}, 12 -> {31, 76}, 13 -> {2, 32}, 14 -> {2, 64}}]
```



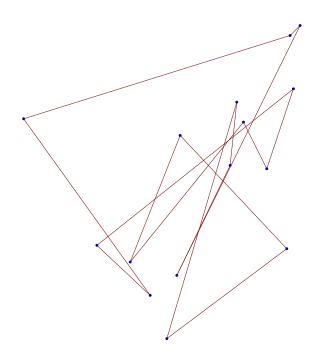
```
Optimal | 359.399 |:
```

```
 \begin{aligned} & \text{GraphPlot}[\{0 \ -> \ 1, \ 1 \ -> \ 2, \ 2 \ -> \ 3, \ 3 \ -> \ 4, \ 4 \ -> \ 5, \ 5 \ -> \ 6, \ 6 \ -> \ 7, \ 7 \ -> \ 8, \ 8 \ -> \ 9, \\ & 9 \ -> \ 10, \ 10 \ -> \ 11, \ 11 \ -> \ 12, \ 12 \ -> \ 13, \ 13 \ -> \ 14, \ 14 \ -> \ 0\}, \ VertexCoordinateRules \ -> \\ & \{0 \ -> \ \{46, \ 51\}, \ 1 \ -> \ \{34, \ 42\}, \ 2 \ -> \ \{31, \ 21\}, \ 3 \ -> \ \{6, \ 25\}, \ 4 \ -> \ \{4, \ 25\}, \\ & 5 \ -> \ \{2, \ 32\}, \ 6 \ -> \ \{12, \ 42\}, \ 7 \ -> \ \{2, \ 64\}, \ 8 \ -> \ \{31, \ 76\}, \ 9 \ -> \ \{73, \ 91\}, \\ & 10 \ -> \ \{91, \ 81\}, \ 11 \ -> \ \{86, \ 54\}, \ 12 \ -> \ \{100, \ 46\}, \ 13 \ -> \ \{92, \ 35\}, \ 14 \ -> \ \{80, \ 1\}\} ] \end{aligned}
```



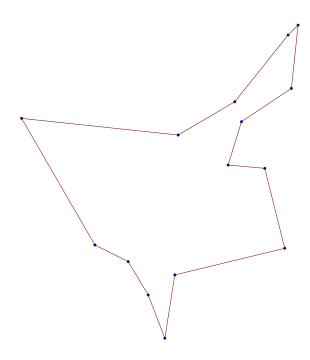
```
Start | 691.618 |:
```

```
 \begin{aligned} & \text{GraphPlot}[\{0 \ -> \ 1, \ 1 \ -> \ 2, \ 2 \ -> \ 3, \ 3 \ -> \ 4, \ 4 \ -> \ 5, \ 5 \ -> \ 6, \ 6 \ -> \ 7, \ 7 \ -> \ 8, \ 8 \ -> \ 9, \\ & 9 \ -> \ 10, \ 10 \ -> \ 11, \ 11 \ -> \ 12, \ 12 \ -> \ 13, \ 13 \ -> \ 14, \ 14 \ -> \ 0\}, \ \text{VertexCoordinateRules} \ -> \\ & \{0 \ -> \ \{24, \ 33\}, \ 1 \ -> \ \{83, \ 80\}, \ 2 \ -> \ \{75, \ 56\}, \ 3 \ -> \ \{68, \ 70\}, \ 4 \ -> \ \{34, \ 28\}, \\ & 5 \ -> \ \{49, \ 66\}, \ 6 \ -> \ \{81, \ 32\}, \ 7 \ -> \ \{45, \ 5\}, \ 8 \ -> \ \{66, \ 76\}, \ 9 \ -> \ \{64, \ 57\}, \\ & 10 \ -> \ \{48, \ 24\}, \ 11 \ -> \ \{85, \ 99\}, \ 12 \ -> \ \{82, \ 96\}, \ 13 \ -> \ \{2, \ 71\}, \ 14 \ -> \ \{40, \ 18\}\}] \end{aligned}
```



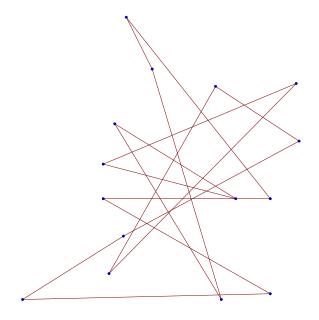
```
Optimal | 317.232 | :
```

```
GraphPlot[{0 -> 1, 1 -> 2, 2 -> 3, 3 -> 4, 4 -> 5, 5 -> 6, 6 -> 7, 7 -> 8, 8 -> 9, 9 -> 10, 10 -> 11, 11 -> 12, 12 -> 13, 13 -> 14, 14 -> 0}, VertexCoordinateRules -> {0 -> {34, 28}, 1 -> {40, 18}, 2 -> {45, 5}, 3 -> {48, 24}, 4 -> {81, 32}, 5 -> {75, 56}, 6 -> {64, 57}, 7 -> {68, 70}, 8 -> {83, 80}, 9 -> {85, 99}, 10 -> {82, 96}, 11 -> {66, 76}, 12 -> {49, 66}, 13 -> {2, 71}, 14 -> {24, 33}}]
```



```
Start | 948.518 |:
```

```
GraphPlot[{0 -> 1, 1 -> 2, 2 -> 3, 3 -> 4, 4 -> 5, 5 -> 6, 6 -> 7, 7 -> 8, 8 -> 9, 9 -> 10, 10 -> 11, 11 -> 12, 12 -> 13, 13 -> 14, 14 -> 0}, VertexCoordinateRules -> {0 -> {30, 49}, 1 -> {76, 37}, 2 -> {34, 63}, 3 -> {71, 2}, 4 -> {47, 82}, 5 -> {38, 100}, 6 -> {88, 37}, 7 -> {30, 37}, 8 -> {88, 4}, 9 -> {2, 2}, 10 -> {37, 24}, 11 -> {98, 57}, 12 -> {69, 76}, 13 -> {32, 11}, 14 -> {97, 77}}]
```



```
Optimal | 368.79 |:
```

```
 \begin{aligned} & \text{GraphPlot}[\{0 \ -> \ 1, \ 1 \ -> \ 2, \ 2 \ -> \ 3, \ 3 \ -> \ 4, \ 4 \ -> \ 5, \ 5 \ -> \ 6, \ 6 \ -> \ 7, \ 7 \ -> \ 8, \ 8 \ -> \ 9, \\ & 9 \ -> \ 10, \ 10 \ -> \ 11, \ 11 \ -> \ 12, \ 12 \ -> \ 13, \ 13 \ -> \ 14, \ 14 \ -> \ 0\}, \ \text{VertexCoordinateRules} \ -> \\ & \{0 \ -> \ \{76, \ 37\}, \ 1 \ -> \ \{88, \ 37\}, \ 2 \ -> \ \{98, \ 57\}, \ 3 \ -> \ \{97, \ 77\}, \ 4 \ -> \ \{69, \ 76\}, \\ & 5 \ -> \ \{47, \ 82\}, \ 6 \ -> \ \{38, \ 100\}, \ 7 \ -> \ \{34, \ 63\}, \ 8 \ -> \ \{30, \ 49\}, \ 9 \ -> \ \{30, \ 37\}, \\ & 10 \ -> \ \{37, \ 24\}, \ 11 \ -> \ \{2, \ 2\}, \ 12 \ -> \ \{32, \ 11\}, \ 13 \ -> \ \{71, \ 2\}, \ 14 \ -> \ \{88, \ 4\}\} ] \end{aligned}
```

