

Output for Part 2:

(Try to test more, but computer running really slow.)

Enter start date:

1/1/90

Enter end date:

1/1/90

Crime records between 1/1/90 and 1/1/90

1348656.471,399538.5342,32874,100 BONIFAY ST,ROBBERY,1/1/90,160600,40.40865518,-79.9760891

1359951.481,410726.1273,32874,320 SCHENLEY RD,ROBBERY,1/1/90,140100,40.44013011,-79.93653583

1357049.25,418429.9175,32874,4779 LIBERTY AV,ROBBERY,1/1/90,80900,40.46107271,-79.94764804

1361745.729,419343.2848,32874,5600 PENN AV,AGGRAVATED ASSAULT,1/1/90,111500,40.46389868,-79.93085611

Hamiltonan Cycle(not necessarily optimum):

0 1 2 3 0

Length of Cycle: 9.972129467002565 miles

Looking at every permutation to find the optimal solution

The best permutation

0 2 3 1 0

Optimal Cycle length = 9.499048743818797 miles

Enter start date:

1/16/90

Enter end date:

1/16/90

Crime records between 1/16/90 and 1/16/90

1347066.867,411887.4549,32889,1800 CENTRE AV,AGGRAVATED ASSAULT,1/16/90,30500,40.44243206,-79.98291665

1347066.867,411887.4549,32889,1800 CENTRE AV,ROBBERY,1/16/90,30500,40.44243206,-79.98291665

1355799.792,413225.4539,32889,101 N BELLEFIELD AV,ROBBERY,1/16/90,40400,40.44670552,-79.95167067

1367578.162,415587.9998,32889,128 N LINDEN AV,ROBBERY,1/16/90,140500,40.45398697,-79.90957099

1364246.604,416473.5759,32889,6334 WALNUT ST,ROBBERY,1/16/90,70800,40.45619291,-79.92161726

1357878.729,418527.4065,32889,357 GROSS ST,ROBBERY,1/16/90,80900,40.46139685,-79.94467669

1365928.858,421434.4674,32889,6345 GLENVIEW PL,ROBBERY,1/16/90,110600,40.46991977,-79.91601106

1337604.193,429318.4095,32889,3900 PERRYVILLE AV,ROBBERY,1/16/90,260200,40.48960229,-80.01851137

Hamiltonan Cycle(not necessarily optimum):

0 1 2 5 4 3 6 7 0

Length of Cycle: 15.147000587954707 miles

Looking at every permutation to find the optimal solution

The best permutation

0 1 2 4 3 6 5 7 0

Optimal Cycle length = 14.917629629896926 miles