# 1

23.1710109334546,28.4742075707962,33.7262588454850,39.0311227910240,44.4326271360663,51.8715668297310,54.8122789757384,60.4182361478130,65.7217047837058,70.7090438624913,75.9926429214696,75.9926437713343,82.1953804117864,88.3462438277608,93.6640388241019,88.3610864755282

100.892391814154,95.5890045510450,90.3369438526336,85.0320717359306,79.6305471291344,79.6305107164575,79.6305104217384,74.5774400626382,69.2739715668361,69.2739715038414,63.9903729926148,55.3421646778620,55.3421647262651,61.4930348966416,66.8108306568722,72.1137835182732

# 2

44.4326271360663,39.1447131599570,33.4266060587185,38.3998025978087,43.3885968054021,47.3228932690109,54.8122803191685,62.1101744623919,68.5178335616946,75.9926437713343,82.1953804117864,86.0528335146341,91.3920313550288,98.8920515320342

79.6305471291344,74.3426330294717,68.6245259422737,63.6513293847398,58.6625351622279,54.7282389381568,54.7282396442285,54.7282407593137,54.7282532984572,55.3421646778620,55.3421647262651,51.4847119692301,46.1455143903767,46.1455144648970

# 3

62.3122869867408,54.8122787231386,54.8122786980906,54.8122789757384,54.8122791436436,54.8122796151117,54.8122803191685,54.8122810423758,54.8122814238045,47.5616352617418,47.5616352158836,52.8657646951366,60.4468364918815,65.7500072822052

94.6270581782380,94.6270581293064,87.1278542796365,79.6305104217384,70.5541384747594,62.4925341470361,54.7282396442285,47.1904222985115,39.5245660392326,32.2739197132508,23.9896576960808,18.6855284015807,11.1044570271278,5.80128641240598

# 4

43.3885968054021,35.8883592170471,28.3880229707722,20.8880098053319,13.3879441610605,5.88792319134277

58.6625351622279,58.6625324840353,58.6625316093459,58.6625309093040,58.6625302908863,58.6625299396659

# 原始1

23.3000000000000,31.6000000000000,33.7000000000000,39.7000000000000,46,51.5000000000000,57.4000000000000,61,66.4000000000000,72.3000000000000,74.9000000000000,71.5000000000000,79.3000000000000,84.8000000000000,91.5000000000000,88.7000000000000

102.800000000000,97,90.9000000000000,84.2000000000000,78.6000000000000,78,75.6000000000000,72.8000000000000,71,71,65.7000000000000,57.2000000000000,55.6000000000000,64.1000000000000,68.5000000000000,73.6000000000000

# 原始2

46,39.7000000000000,33.1000000000000,37.9000000000000,42.8000000000000,46.7000000000000,53.1000000000000,60.5000000000000,67.8000000000000,71.5000000000000,79.3000000000000,86.4000000000000,93.4000000000000,99.4000000000000

78.6000000000000,76.3000000000000,69.3000000000000,66.5000000000000,61.4000000000000,56.4000000000000,54.1000000000000,53,53,57.2000000000000,55.6000000000000,51.9000000000000,48.2000000000000,47.7000000000000

# 原始3

70.9000000000000,59.9000000000000,57.4000000000000,57.4000000000000,55.8000000000000,54.5000000000000,53.1000000000000,51.6000000000000,50.2000000000000,47.1000000000000,47.1000000000000,52,60.3000000000000,70.1000000000000

94.9000000000000,93.9000000000000,85.8000000000000,75.6000000000000,68.3000000000000,61.1000000000000,54.1000000000000,46.4000000000000,38.7000000000000,32.5000000000000,24.1000000000000,18.2000000000000,10.5000000000000,4.40000000000000

# 原始4

42.8000000000000,36.3000000000000,27.9000000000000,21,13.2000000000000,1.30000000000000

61.4000000000000,59.5000000000000,59,57.4000000000000,58.2000000000000,56.3000000000000

一下是变换后的复杂上海地铁线路坐标

# 复杂1

837.415711737752,872.909542522375,908.384710791332,943.794515877618,980.161029341908,979.762905542645,979.725429981367,979.725427170504,1006.09640739475,1028.04543185368,1067.62309243229,1101.04273080747,1101.03494857727,1065.29388082413,1053.72405786046,1053.72228266732,1053.72136140420,1053.72135876646,1035.36069137538,1035.36069558724,1035.36069366230,1035.35868159273,1004.00914692143,974.600326217371,974.551578926285,974.457885794713,974.418386553625,974.418326326841

903.483976245832,938.977705526485,974.452223297915,1009.86138480303,1043.92300329343,1093.27394818469,1166.22015389735,1201.45064215909,1244.65203348094,1244.65204097731,1244.65205381714,1278.07464972463,1315.68681911088,1336.19818841397,1336.19819017471,1390.66650012732,1419.14314634798,1453.17940064494,1471.54007055731,1520.08596661245,1569.84423084657,1617.05381878284,1648.40322224854,1677.81202974104,1727.85824567189,1777.86211515724,1827.94937428548,1877.94938532851

# 复杂2

2061.95766238582,2026.60303340541,1931.56262268029,1831.09558332403,1753.84228512201,1718.01426815704,1681.35094792467,1625.64961814811,1526.81723887239,1489.76989897289,1428.86552298179,1377.40928679923,1334.69052836001,1299.32459020184,1263.77367323335,1220.39325337591,1188.62382716700,1153.01545319965,1101.03494857727,1059.93807732831,1028.04541809878,972.677276928743,928.937140578366,892.265814500753,842.418826516119,792.673962166854,743.607923235482,708.022583448685,658.041428495581,621.626878398629

1048.77689711916,1084.13152073158,1173.75591021854,1173.81671762545,1173.87798369960,1209.70601358532,1246.36935325063,1246.37079100140,1246.41673494413,1212.10354506895,1212.10354977883,1211.39475319979,1241.54157945551,1276.90751563022,1312.26004801909,1315.74484988681,1315.74485749917,1315.72998773856,1315.68681911088,1279.44879209253,1279.44877493257,1276.40241500298,1273.99582421669,1273.98209468431,1271.41105554470,1270.14265350494,1269.22201468314,1204.23917581567,1203.14279415054,1166.71851201998

# 复杂3

980.161029341908,1013.39713143949,1012.48856335885,977.161074465697,944.466341707968,928.964041252586,928.951977551432,928.937140578366,928.922935352310,949.938381447828,979.302594104852,1007.64496817616,1053.72228266732,1102.73762747816,1120.16147523055,1120.16126853731,1120.16120542226,1120.12802695146,1120.06991998866,1120.06570243786,1153.35637232511,1188.46729819682,1188.39972863207,1151.02105417184,1150.99902987841,1115.47188090167,1115.46279023547,1065.42444413992,1015.42441286331

1043.92300329343,1033.84129398972,1093.53794957201,1128.88040148058,1166.22015635785,1196.98811572060,1234.35943850308,1273.99582421669,1311.94298801519,1332.95843389853,1362.32263131115,1390.66500337401,1390.66650012732,1390.66810761875,1420.85400607726,1462.91570955978,1480.19463712273,1522.36350793224,1571.77089741717,1621.43750653539,1654.72818437828,1689.83911856517,1739.82204579743,1777.19107327689,1827.15292281362,1862.67856395295,1912.67416568448,1912.67414359167,1912.67413556823

# 复杂4

944.466341707968,979.725429981367,1006.64875357630,1028.04541831734,1074.85578418471,1107.41858826600,1153.48396284894,1197.37809519135,1228.00659878485,1263.77367066303,1263.77367001507,1263.77367323335,1235.55352590677,1235.55351992625,1211.65490632473,1203.67755690571,1151.70414153039,1102.73762747816,1053.72228266732,1007.64496817616,979.302594104852,949.938381447828,928.922935352310,928.937140578366,928.951977551432,928.964041252586

1166.22015635785,1166.22015389735,1166.22016259586,1187.56527693813,1187.56523401014,1187.37378463336,1205.21110204805,1222.20767996748,1222.20767347635,1222.20767132210,1271.35485398860,1312.26004801909,1340.50695955849,1366.21154403162,1390.09237266286,1398.06379731526,1394.26720877706,1390.66810761875,1390.66650012732,1390.66500337401,1362.32263131115,1332.95843389853,1311.94298801519,1273.99582421669,1234.35943850308,1196.98811572060

# 复杂5

837.415711737752,837.415596306633,876.215848779158,893.396832423564,914.495172593761,950.199274905018,950.402330612641,915.046907588906,876.328578594963,826.338293830343,776.338302868219

903.483976245832,849.632693748132,810.787550323868,750.652644523200,673.874977337399,638.705439058683,578.480267648083,543.121508701025,543.121502048385,543.121494233128,543.121453397316

# 复杂6

1396.19121596050,1431.54771213926,1466.90344217155,1466.90343977567,1438.55924020424,1438.55912713937,1438.55815445747,1438.55781313867,1438.55754560007,1438.55754219074,1416.31830067794,1392.55352351885,1370.46135892214,1346.25576277822,1305.52402168834,1265.66056066471,1263.77367323335,1263.77367001507,1263.77367066303,1250.54825926837,1224.34817339116,1224.35034793006,1224.35198549809,1224.36914498753,1224.36915297768,1196.44283399442,1161.92054705843,1147.56089852409

1739.79580528531,1704.43931266618,1669.08358935731,1619.72018201413,1591.37598433634,1554.10982482045,1518.54905110338,1478.84210368968,1446.54789772350,1421.23492187546,1398.99568444580,1375.23257326838,1353.14115182537,1328.93556866868,1328.93558166771,1328.93559527871,1312.26004801909,1271.35485398860,1222.20767132210,1208.98226350721,1182.78219098995,1140.61710622455,1109.05411214680,1064.81657558247,1035.32867553374,1035.32868169360,1035.32869501353,1023.39011047639

# 复杂7

1392.46553715515,1377.40928679923,1340.52988187511,1304.05549249033,1256.73799231896,1224.35034793006,1203.55239740875,1172.61126909714,1123.06254731057,1086.01896122827,1067.28313454064,1028.04541831734,1028.04542145854,1028.04543185368,1028.04541809878,1028.04540434308,1000.40736161621,979.302594104852,953.518096300678,953.518161462156,953.518242406860,953.518322166848,937.453046697867,937.453145433531,909.998920624441,879.286433608660,854.274314648663,814.351098085845,814.353195428447,779.024242531434,743.809747569285,743.820708763474,743.820713600796

1260.00121089669,1211.39475319979,1177.29384299967,1140.79348310365,1140.61879765854,1140.61710622455,1140.61602710955,1136.43317868086,1129.73481432815,1129.53902232510,1148.27484196787,1187.56527693813,1201.45062220733,1244.65204097731,1279.44877493257,1313.57983736982,1341.21785989748,1362.32263131115,1388.10718650178,1421.03063880534,1455.29339524790,1502.98607351295,1519.05135699362,1569.02922596028,1596.48345681088,1627.19595492112,1627.19597261620,1627.19620506824,1698.00065033409,1733.40180864667,1768.89743495504,1832.67432648079,1882.67434693079

# 复杂8

1205.54375087238,1205.54374219175,1205.54373347023,1205.54373740155,1173.33688192084,1134.06817571800,1147.56089852409,1144.23083077892,1176.74977527173,1172.61126909714,1168.58578974019,1153.48396284894,1146.62456799686,1132.58146066607,1116.19056490826,1101.03494857727,1100.93064367086,1098.91440701419,1098.74610350232,1120.16126853731,1167.79341434615,1171.81983922638,1195.14243730052,1227.93576443230,1261.83600312589,1278.55335961770,1278.55313294054,1278.55301793286,1278.55299108125,1278.55297696508

720.080771761344,770.080777496525,824.870154043085,876.034936826436,930.835444757975,970.300874502400,1023.39011047639,1073.28579229532,1105.82011661255,1136.43317868086,1166.21021105448,1205.21110204805,1222.78628424115,1258.66703483695,1300.53120496792,1315.68681911088,1357.48957124529,1410.80952547541,1462.91562712887,1462.91570955978,1462.91585929958,1458.88943907350,1435.56700025995,1435.56707673384,1469.46733366477,1486.18470025814,1530.40383667424,1562.33208966005,1595.46624856913,1645.46622897893

# 复杂9

1313.30192962896,1263.77367323335,1228.09448296402,1192.85759429243,1146.62456799686,1110.80946637606,1092.05494483403,1074.85579615461,1028.04542145854,979.725427170504,944.466341707968,909.946543487680,874.542574813647,824.773919979982,789.186211995688,739.193275820391,702.446145412673,660.219121171249,474.539555487553,398.413215937009,398.413217678022,398.475739311253,398.494848413387,398.494861722429,398.494864206072,398.494867088513

1317.98091860633,1312.26004801909,1276.34813954680,1240.88110002826,1222.78628424115,1208.78326069495,1201.45060068674,1201.45060249137,1201.45062220733,1201.45064215909,1166.22015635785,1131.69732737995,1096.23278795772,1096.15515397243,1060.50579138665,1060.50540029786,1023.75826947022,981.532123925241,935.108029675978,857.920070625603,807.449600618935,706.823979827623,631.598105014076,581.544969999784,531.468254313608,481.468244252460

# 复杂10

1194.08850690228,1194.08849278889,1194.08849093718,1223.17538962418,1223.17540325419,1223.17543065005,1192.52680847364,1171.81983922638,1148.67432287754,1151.70414153039,1152.98539474133,1152.99482225802,1153.01545319965,1153.03606565573,1132.58146066607,1096.78375437246,1067.62309243229,1030.55169205333,979.335333750122,928.964041252586,917.380601395603,896.226092957119,858.478171426226,823.117618679244,778.472138412984,733.994352592156,708.022583448685,658.041428495581,802.586102453641,774.068702334809,738.713404627553

1667.38504538439,1618.88565104773,1587.64263659028,1558.55575186557,1537.83406410942,1510.25126178930,1479.59645344679,1458.88943907350,1435.74390233267,1394.26720877706,1376.72741349439,1357.59415849209,1315.72998773856,1266.67552931371,1258.66703483695,1244.65644573940,1244.65205381714,1207.58066049621,1202.48120766284,1196.98811572060,1196.98437478116,1196.98437458006,1196.93078103492,1161.52653136775,1161.51370908726,1161.51369163254,1204.23917581567,1203.14279415054,1134.74789450180,1106.23049090976,1070.87519231401

## 复杂1较好结果

829.100481427685,864.471416969020,899.892363513560,935.267441007870,971.692085780836,971.692190946074,971.745848018130,971.784916630606,984.337166877031,1021.77889359715,1057.15538545623,1105.64270328963,1119.44773804282,1075.93540672150,1061.31046352632,1061.25811918880,1061.25762759959,1061.25749731980,1023.29725855080,1023.24779794970,1023.23535344171,1023.22558105055,987.850755533691,952.472618970927,952.471790872630,952.470166781953,952.464988056911,952.464596900197

887.930170884054,923.297214085480,958.715183891148,994.051552226551,1028.32274253420,1063.93441807833,1136.76619414091,1186.33346518739,1234.73193173839,1234.75261412640,1234.76763717860,1246.97224475445,1294.97269530127,1319.60300451461,1343.48033316271,1393.17849511268,1443.10449835403,1483.88372718388,1516.42621149310,1566.41764197524,1616.37424596399,1666.36712279148,1701.70221604016,1737.03414563307,1787.01885083467,1837.01775465447,1887.01511437969,1937.01423381625

## 复杂2较好结果

1944.01743132362,1908.66045439351,1873.29760474904,1823.27643323647,1773.23492373691,1737.79045950129,1687.42141508559,1637.34649612616,1587.24425053571,1537.23942410126,1487.22278533430,1437.59177891457,1393.37494287614,1354.02908466144,1295.48409790648,1245.92592204213,1212.21864999877,1169.47108997409,1119.44773804282,1070.83592088442,1021.75728015426,951.915352863236,896.905258918036,846.842206911492,795.849934123006,745.506833349394,695.360963441098,670.238943393478,620.238452327811,584.866839111967

1089.76386119376,1125.12098756294,1160.48360746336,1160.48357365516,1160.48316610164,1195.92178786564,1196.12906449031,1196.31299778301,1196.37786171986,1196.41764075977,1196.43333276796,1190.06047464937,1214.24549837450,1245.33069523323,1257.80324190470,1258.07808141101,1295.00618617626,1294.99213745244,1294.97269530127,1282.90662329618,1270.94133204268,1253.89524112192,1240.46937729347,1240.48106815405,1240.62665880396,1241.07333573729,1241.53168552481,1198.30301799569,1198.30386506994,1162.96553138777

## 复杂3较好结果

971.692085780836,1019.57215976922,1019.57249968916,983.975765379543,950.569357294292,932.246617063701,896.894653486964,896.905258918036,896.910983848673,933.361253079145,969.806713128338,1006.25246221185,1061.25811918880,1111.25596586396,1133.14337215432,1097.77827386354,1062.41203479499,1097.72699478209,1097.52782351615,1097.43848874789,1132.78602920038,1168.13274213164,1168.00978434895,1132.65058982526,1132.45194468283,1097.09298011843,1097.09304867591,1047.09272332321,997.093012059462

1028.32274253420,1013.91931733662,1063.93094554966,1099.57538676890,1136.78247901178,1155.10514456995,1190.46457240674,1240.46937729347,1290.46972935470,1324.70966875498,1358.94456228659,1393.17689811006,1393.17849511268,1393.17729355830,1438.08672382665,1473.43229324610,1508.77827619227,1544.15560947817,1594.15491484875,1644.15535767305,1679.51590901900,1714.87911781387,1764.87894757104,1800.23901162089,1850.23919428792,1885.59910150744,1935.59948389657,1935.59996614511,1935.60004448410

## 复杂4较好结果

950.569357294292,971.745848018130,1021.67888228679,1021.84556386568,1057.21685143597,1107.17646604773,1155.63244576284,1205.66031094957,1255.71938073352,1301.06005065370,1301.06687862929,1295.48409790648,1257.64595938852,1254.60037999069,1214.88695629362,1176.46959884730,1142.54740205068,1111.25596586396,1061.25811918880,1006.25246221185,969.806713128338,933.361253079145,896.910983848673,896.905258918036,896.894653486964,932.246617063701

1136.78247901178,1136.76619414091,1136.73100443953,1136.89768134447,1136.92333950064,1136.94202288652,1136.96543682133,1136.98960605960,1136.99522844284,1158.10242193477,1208.10663604812,1257.80324190470,1295.68045231597,1377.46330983012,1417.17638140969,1455.59129196297,1423.12633301396,1393.17729355830,1393.17849511268,1393.17689811006,1358.94456228659,1324.70966875498,1290.46972935470,1240.46937729347,1190.46457240674,1155.10514456995

## 复杂5较好结果

829.100481427685,828.980278157375,864.287469382065,899.594735573689,899.584312541706,899.580693632327,899.577136095903,899.544943548612,849.543893869429,799.541664586326,749.541136087727

887.930170884054,837.930593875767,802.528018534041,767.125178159034,717.122302722595,667.118791726509,617.109501349474,567.105371083948,567.096941572139,567.088775337618,567.085270339674

## 复杂6较好结果

1419.56952605506,1454.92394432880,1490.28050854171,1525.63654311636,1490.28671926548,1493.56532725882,1497.09405663484,1497.12178911991,1497.14947478267,1497.21580462925,1461.91223917856,1427.96227692845,1408.42848352695,1394.67982667246,1344.77652750892,1294.79838641932,1295.48409790648,1301.06687862929,1301.06005065370,1266.43944814973,1266.44467466377,1266.44740244810,1266.45339224281,1302.98908320469,1303.49464593456,1253.55092084121,1203.55345157786,1153.55957412160

1801.66762323138,1766.31312463830,1730.95809489380,1695.60366468914,1660.24343904806,1610.35158108674,1560.47663266700,1510.47841010396,1460.47909422270,1410.47937495252,1375.08558013698,1341.09951442551,1321.55971863015,1307.80914148602,1307.80420366694,1307.79830156789,1257.80324190470,1208.10663604812,1158.10242193477,1122.02657846525,1171.89720946043,1121.10066541435,1071.11279178918,1036.97803966920,986.989591297786,986.990433391186,986.991516484337,986.974453636914

## 复杂7较好结果

1446.85659166167,1437.59177891457,1401.69906118444,1366.44588569490,1316.44644074977,1266.44740244810,1216.44648938416,1181.07890265073,1145.72052643788,1097.02438842336,1057.21624128427,1021.84556386568,1021.80455346694,1021.77889359715,1021.75728015426,1010.13418664257,993.649623482382,969.806713128338,955.064682482730,956.231858552489,957.127347948680,957.917356560275,924.567929741973,924.568694975528,889.261165938013,853.882280050310,803.883484557449,753.883641293809,753.886112581992,753.897345790934,718.545835834887,718.547403987228,718.548087495878

1239.19389482187,1190.06047464937,1156.20908055979,1120.98245226028,1121.10316490736,1121.10066541435,1121.09482891750,1085.73320163814,1050.38232279349,1061.72618163394,1101.52647417932,1136.89768134447,1186.37335365161,1234.75261412640,1270.94133204268,1318.61374524538,1335.09822654078,1358.94456228659,1374.63978235671,1424.62483855771,1474.61700545399,1524.61004567963,1557.95934953919,1607.95918354527,1643.26583398535,1678.48629923462,1678.47869476788,1678.47589384587,1728.47347490874,1778.47321485503,1813.82501959063,1863.82055541076,1913.82039071600

## 复杂8较好结果

1183.81997549928,1183.82056850111,1183.82288673871,1183.82665875688,1148.47511606332,1113.12275642968,1153.55957412160,1168.99406346857,1216.43130816755,1181.07890265073,1155.64391798218,1155.63244576284,1155.60770495970,1155.57088264647,1155.55471075988,1119.44773804282,1119.04665931837,1117.76411048083,1062.58794562065,1097.77827386354,1131.48712191412,1166.83799536288,1202.20057978948,1252.19200995192,1287.56973914417,1322.91508226599,1322.91708002960,1322.91662351761,1322.91771668930,1322.91697269446

736.839682123524,786.839762649923,836.843534075686,886.846160886402,922.205170762675,957.563627628782,986.974453636914,1034.53583491063,1050.37626885347,1085.73320163814,1111.17368675532,1136.96543682133,1186.41869567031,1234.79769264797,1259.16629835632,1294.97269530127,1344.97097201575,1394.95519039367,1438.22199527463,1473.43229324610,1507.16040900753,1471.80565744958,1436.43881070593,1436.37324303231,1471.68561129417,1507.01258320177,1557.00180962069,1606.99971642540,1656.99901819210,1706.99979008091

## 复杂9较好结果

1334.11942378188,1295.48409790648,1259.86086801844,1224.12981047155,1155.60770495970,1105.61570795938,1091.85343967871,1057.19302447191,1021.80455346694,971.784916630606,950.569357294292,913.082127712987,857.496066134818,807.504402720615,771.362499397827,721.392774787234,685.108551677626,648.498682329064,539.656546296997,504.285430162335,468.925297858904,452.725995666351,452.705149220780,452.701366769578,452.698448741792,452.698477597861

1289.54174409179,1257.80324190470,1222.18400710922,1186.45809979871,1186.41869567031,1186.40256423390,1186.40277456235,1186.39235736319,1186.37335365161,1186.33346518739,1136.78247901178,1099.30334655267,1090.52459565694,1089.58588117456,1053.44399706524,1051.48024809888,1015.19528484781,978.586124739289,869.653456715749,834.280816250678,798.920674521668,751.608056540686,701.605871343116,651.594419398624,601.594097619829,551.594403362582

## 复杂10较好结果

1237.68597048655,1237.68621926554,1237.68673739535,1273.03121616665,1273.03163585101,1237.59130526165,1202.20240903987,1166.83799536288,1130.61999113346,1142.54740205068,1169.46056046739,1169.45151185385,1169.47108997409,1169.50598204767,1155.57088264647,1105.61380598936,1057.15538545623,1018.48504838273,967.598077612329,932.246617063701,896.473538876542,894.160506476929,844.347658396848,795.215998814510,745.215955768589,695.217115191126,670.238943393478,620.238452327811,667.618507097429,632.304832065838,596.959415893958

1763.55980266191,1713.55938525892,1663.55251410087,1628.08444367804,1578.02060718681,1542.56348264227,1507.16846198827,1471.80565744958,1435.59173503098,1423.12633301396,1395.00600595910,1345.00238939146,1294.99213745244,1234.80582690541,1234.79769264797,1234.76785118096,1234.76763717860,1203.03441961651,1190.45355379952,1155.10514456995,1119.33460114131,1169.27991569500,1164.84129147995,1155.51424901353,1155.28518570251,1155.04106076127,1198.30301799569,1198.30386506994,1182.32961062845,1146.93250618026,1111.56767537574

## 复杂12较好结果

1647.12022782484,1647.12101169722,1597.12166680476,1547.12152193993,1497.12178911991,1447.54255190091,1397.83109044261,1347.87788538233,1312.70107115641,1277.46142409695,1237.09467924026,1214.88695629362,1180.87311078273,1219.01248658738,1169.45151185385,1119.04665931837,1061.31046352632,1070.83592088442,1057.15538545623,1057.19302447191,1057.21685143597,1057.21624128427,1054.15804545573,1019.57249968916,971.692190946074,921.661259182207,886.268917598906,836.254678361478,800.870846848048,800.852049117819,750.851383720129,700.849866514017

1460.51235940554,1510.51224110345,1510.51192541326,1510.50590548085,1510.47841010396,1510.45157908062,1510.44489211865,1510.39166944158,1474.86023347987,1439.39098980220,1439.38565366422,1417.17638140969,1383.15969165486,1345.02454752221,1345.00238939146,1344.97097201575,1343.48033316271,1282.90662329618,1234.76763717860,1186.39235736319,1136.92333950064,1101.52647417932,1098.46787852888,1063.93094554966,1063.93441807833,1063.93610430748,1028.58338043548,1028.54589422556,993.162418703297,943.162315851210,943.158175963000,943.156760148808

## 复杂13较好结果

611.576408132393,661.575348061418,711.575464357667,761.573177271367,796.926599734104,846.926547849767,896.910983848673,941.715764994060,958.294405300847,993.649623482382,1023.69671906785,1061.31046352632,1107.96901045260,1070.83592088442,1105.60892020019,1105.61380598936,1105.61570795938,1105.61829353849,1105.61819773046

1325.80553529307,1325.80648511957,1325.80796667521,1325.81111234509,1290.45721655591,1290.46756500663,1290.46972935470,1295.68550957248,1299.74291628983,1335.09822654078,1365.14418768636,1343.48033316271,1325.51062776718,1282.90662329618,1247.06654204908,1234.76785118096,1186.40256423390,1136.40109413460,1086.40108333208

## 复杂16较好结果

2231.28930293665,2192.65400281314,2155.30476082097,1962.54797241939,1924.42562576022,1770.83718300018,1683.55857640070,1648.03158704121,1612.51286227921,1549.69229378849,1497.33348778897,1460.68878259638,1437.59177891457

363.357773487952,397.123879047905,431.659411052269,550.029296266332,588.130364757421,712.830479497292,800.112846418396,835.639863493149,871.159584092268,937.022929983891,1057.15861518428,1141.23847805070,1190.06047464937

Vnx

1347.87788538233,195.037413049902,1202.20057978948,437,952.470166781953,1111.25596586396,1097.09298011843,899.584312541706,745.506833349394,1394.67982667246,1497.21580462925,933.361253079145,971.692190946074,857.496066134818,983.975765379543,307,1010.13418664257,1021.77889359715,924.568694975528,1183.81997549928,1216.43130816755,1062.41203479499,1773.23492373691,1687.42141508559,828.980278157375,1091.85343967871,1097.72699478209,924.567929741973,846.926547849767,957.127347948680,1214.88695629362,1057.21685143597,1155.55471075988,1408.42848352695,2231.28930293665,1670,1021.84556386568,1133.14337215432,1245.92592204213,899.577136095903,1153.55957412160,1497.09405663484,800.870846848048,1447.54255190091,1266.45339224281,468.925297858904,1401.69906118444,711.575464357667,901.449092551805,1397.83109044261,952.464596900197,1419.56952605506,1266.44740244810,1302.98908320469,952.471790872630,1023.22558105055,753.886112581992,800.852049117819,68.9086525189926,1587.24425053571,921.661259182207,913.082127712987,1219.01248658738,1237.59130526165,1142.54740205068,1908.66045439351,1061.31046352632,1490.28050854171,1648.03158704121,596.959415893958,807.504402720615,1612.51286227921,984.337166877031,886.268917598906,1097.77827386354,836.254678361478,695.217115191126,670.238943393478,620.238452327811,932.246617063701,750.851383720129,1097.02438842336,952.472618970927,1446.85659166167,34.7250083881378,849.543893869429,1737.79045950129,1303.49464593456,1460.68878259638,1105.60892020019,1105.64270328963,1322.91708002960,1287.56973914417,1924.42562576022,1962.54797241939,415,387,464,1057.19302447191,899.580693632327,1023.69671906785,1237.09467924026,1252.19200995192,951.915352863236,1273.03121616665,1097.52782351615,997.093012059462,1183.82288673871,967.598077612329,1647.12022782484,1597.12166680476,1537.23942410126,899.544943548612,1461.91223917856,896.910983848673,661.575348061418,611.576408132393,935.267441007870,1366.44588569490,1021.75728015426,648.498682329064,1497.12178911991,1521,955.064682482730,1301.06005065370,1155.57088264647,859,899.892363513560,1183.82056850111,2192.65400281314,1176.46959884730,1266.44467466377,1203.55345157786,1823.27643323647,1113.12275642968,753.897345790934,667.618507097429,1019.57249968916,1054.15804545573,1057.21624128427,795.215998814510,1437.59177891457,1052.76982514694,1312.70107115641,941.715764994060,846.842206911492,1148.47511606332,1107.17646604773,1155.60770495970,1212.21864999877,718.547403987228,1497.33348778897,1105.61570795938,528,718.548087495878,1344.77652750892,749.541136087727,853.882280050310,1169.47108997409,1070.83592088442,1205.66031094957,665,1322.91771668930,1277.46142409695,718.545835834887,1023.23535344171,1301.06687862929,1257.64595938852,1944.01743132362,1183.82665875688,1293,721.392774787234,700.849866514017,753.883641293809,818,761.573177271367,1119.04665931837,1131.48712191412,1119.44773804282,1176.66710965824,1247,1237.68673739535,1057.15538545623,1259.86086801844,889.261165938013,803.883484557449,745.215955768589,1266.43944814973,1061.25811918880,1354.02908466144,1023.29725855080,971.692085780836,250,382,1021.67888228679,971.745848018130,1018.48504838273,892,1019.98211686023,1253.55092084121,504.285430162335,1647.12101169722,829.100481427685,1019.57215976922,1105.61819773046,1105.61829353849,1295.48409790648,1393.37494287614,1322.91697269446,2155.30476082097,1132.45194468283,844.347658396848,1169.46056046739,1166.83799536288,539.656546296997,452.725995666351,452.698477597861,452.701366769578,452.705149220780,1132.65058982526,1168.13274213164,695.360963441098,896.473538876542,1637.34649612616,1255.71938073352,741,1180.87311078273,1169.45151185385,1047.09272332321,987.850755533691,1202.20240903987,1454.92394432880,1525.63654311636,864.471416969020,795.849934123006,799.541664586326,1023.24779794970,1273.03163585101,1497.14947478267,1493.56532725882,958.294405300847,785,1062.58794562065,1155.63244576284,1322.91662351761,1224.12981047155,1683.55857640070,956.231858552489,1237.68597048655,1105.61380598936,1075.93540672150,771.362499397827,957.917356560275,1332.24048143507,971.784916630606,584.866839111967,896.894653486964,1322.91508226599,1061.25749731980,1547.12152193993,1316.44644074977,1334.11942378188,1254.60037999069,1168.99406346857,1181.07890265073,1770.83718300018,894.160506476929,950.569357294292,1237.68621926554,1097.43848874789,864.287469382065,1130.61999113346,1097.09304867591,952.464988056911,1374.43793696320,1169.50598204767,1294.79838641932,1873.29760474904,1076.31227520186,1427.96227692845,1216.44648938416,1168.00978434895,1487.22278533430,1132.78602920038,1145.72052643788,993.649623482382,160.364347225072,1021.80455346694,796.926599734104,909,969.806713128338,685.108551677626,1155.64391798218,1061.25762759959,896.905258918036,1006.25246221185,1117.76411048083,1549.69229378849,1490.28671926548,899.594735573689,632.304832065838,1107.96901045260,452.698448741792

Vny