Testing average cycles for attraction strength 0.8  
Number of cycles run: 2422  
Number of cycles run: 10544  
Number of cycles run: 2706  
Number of cycles run: 1065  
Number of cycles run: 6972  
Number of cycles run: 1206  
Number of cycles run: 5695  
Number of cycles run: 2447  
Number of cycles run: 2878  
Number of cycles run: 1352  
Number of cycles run: 2628  
Number of cycles run: 5540  
Number of cycles run: 2306  
Number of cycles run: 1812  
Number of cycles run: 1106  
Number of cycles run: 992  
Number of cycles run: 9498  
Number of cycles run: 1847  
Number of cycles run: 2932  
Number of cycles run: 696  
Number of cycles run: 877  
Number of cycles run: 1521  
Number of cycles run: 19995  
Number of cycles run: 50000  
Number of cycles run: 3084  
Number of cycles run: 844  
Number of cycles run: 2640  
Number of cycles run: 2014  
Number of cycles run: 5062  
Number of cycles run: 2331  
Number of cycles run: 6516  
Number of cycles run: 7300  
Number of cycles run: 2499  
Number of cycles run: 6865  
Number of cycles run: 1722  
Number of cycles run: 4026  
Number of cycles run: 2489  
Number of cycles run: 9397  
Number of cycles run: 50000  
Number of cycles run: 1706  
Number of cycles run: 1455  
Number of cycles run: 2907  
Number of cycles run: 921  
Number of cycles run: 8847  
Number of cycles run: 3401  
Number of cycles run: 27766  
Number of cycles run: 1540  
Number of cycles run: 1800  
Number of cycles run: 3446  
Number of cycles run: 1969  
Av cycles for attraction strength 0.8 is 6031  
standard diviation is 10272.41820473939  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 790  
Number of cycles run: 50000  
Number of cycles run: 1175  
Number of cycles run: 5228  
Number of cycles run: 899  
Number of cycles run: 2418  
Number of cycles run: 4707  
Number of cycles run: 1891  
Number of cycles run: 1082  
Number of cycles run: 1711  
Number of cycles run: 2852  
Number of cycles run: 1698  
Number of cycles run: 893  
Number of cycles run: 3492  
Number of cycles run: 2004  
Number of cycles run: 3790  
Number of cycles run: 1420  
Number of cycles run: 1262  
Number of cycles run: 912  
Number of cycles run: 2542  
Number of cycles run: 4348  
Number of cycles run: 824  
Number of cycles run: 805  
Number of cycles run: 1326  
Number of cycles run: 4607  
Number of cycles run: 7648  
Number of cycles run: 1480  
Number of cycles run: 2989  
Number of cycles run: 1560  
Number of cycles run: 774  
Number of cycles run: 2226  
Number of cycles run: 1424  
Number of cycles run: 50000  
Number of cycles run: 1505  
Number of cycles run: 927  
Number of cycles run: 1743  
Number of cycles run: 1349  
Number of cycles run: 15762  
Number of cycles run: 848  
Number of cycles run: 3256  
Number of cycles run: 1175  
Number of cycles run: 2205  
Number of cycles run: 1934  
Number of cycles run: 2313  
Number of cycles run: 18372  
Number of cycles run: 4827  
Number of cycles run: 2375  
Number of cycles run: 4946  
Number of cycles run: 2400  
Number of cycles run: 3103  
Av cycles for attraction strength 0.8 is 4796  
standard diviation is 9877.943619364658  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 2206  
Number of cycles run: 2057  
Number of cycles run: 4692  
Number of cycles run: 1886  
Number of cycles run: 9823  
Number of cycles run: 1751  
Number of cycles run: 9008  
Number of cycles run: 3321  
Number of cycles run: 1941  
Number of cycles run: 2041  
Number of cycles run: 947  
Number of cycles run: 1775  
Number of cycles run: 50000  
Number of cycles run: 1332  
Number of cycles run: 50000  
Number of cycles run: 20123  
Number of cycles run: 2064  
Number of cycles run: 3482  
Number of cycles run: 860  
Number of cycles run: 2007  
Number of cycles run: 3977  
Number of cycles run: 8347  
Number of cycles run: 3602  
Number of cycles run: 3715  
Number of cycles run: 2606  
Number of cycles run: 2544  
Number of cycles run: 9336  
Number of cycles run: 1237  
Number of cycles run: 2208  
Number of cycles run: 4588  
Number of cycles run: 1677  
Number of cycles run: 3205  
Number of cycles run: 28182  
Number of cycles run: 1314  
Number of cycles run: 2366  
Number of cycles run: 2032  
Number of cycles run: 2476  
Number of cycles run: 793  
Number of cycles run: 3424  
Number of cycles run: 2061  
Number of cycles run: 2451  
Number of cycles run: 2116  
Number of cycles run: 2282  
Number of cycles run: 1035  
Number of cycles run: 1592  
Number of cycles run: 2755  
Number of cycles run: 823  
Number of cycles run: 817  
Number of cycles run: 9244  
Number of cycles run: 1810  
Av cycles for attraction strength 0.8 is 5718  
standard diviation is 10330.961588470309  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 2092  
Number of cycles run: 2305  
Number of cycles run: 16019  
Number of cycles run: 3057  
Number of cycles run: 2719  
Number of cycles run: 2490  
Number of cycles run: 12875  
Number of cycles run: 1202  
Number of cycles run: 832  
Number of cycles run: 1045  
Number of cycles run: 2089  
Number of cycles run: 10062  
Number of cycles run: 26752  
Number of cycles run: 5583  
Number of cycles run: 1753  
Number of cycles run: 850  
Number of cycles run: 1325  
Number of cycles run: 4068  
Number of cycles run: 802  
Number of cycles run: 1153  
Number of cycles run: 1061  
Number of cycles run: 5092  
Number of cycles run: 4109  
Number of cycles run: 9690  
Number of cycles run: 3983  
Number of cycles run: 3050  
Number of cycles run: 2546  
Number of cycles run: 4001  
Number of cycles run: 3019  
Number of cycles run: 2030  
Number of cycles run: 974  
Number of cycles run: 7092  
Number of cycles run: 1614  
Number of cycles run: 5690  
Number of cycles run: 3030  
Number of cycles run: 5684  
Number of cycles run: 6694  
Number of cycles run: 926  
Number of cycles run: 36846  
Number of cycles run: 8991  
Number of cycles run: 4376  
Number of cycles run: 50000  
Number of cycles run: 3678  
Number of cycles run: 2662  
Number of cycles run: 2009  
Number of cycles run: 1335  
Number of cycles run: 2855  
Number of cycles run: 19931  
Number of cycles run: 2559  
Number of cycles run: 2151  
Av cycles for attraction strength 0.8 is 6135  
standard diviation is 9286.322792127778  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 2864  
Number of cycles run: 2870  
Number of cycles run: 6238  
Number of cycles run: 1751  
Number of cycles run: 2067  
Number of cycles run: 1464  
Number of cycles run: 4647  
Number of cycles run: 763  
Number of cycles run: 2107  
Number of cycles run: 5140  
Number of cycles run: 3318  
Number of cycles run: 2349  
Number of cycles run: 1060  
Number of cycles run: 4532  
Number of cycles run: 7278  
Number of cycles run: 4301  
Number of cycles run: 859  
Number of cycles run: 12017  
Number of cycles run: 1343  
Number of cycles run: 1048  
Number of cycles run: 2589  
Number of cycles run: 3396  
Number of cycles run: 1222  
Number of cycles run: 1481  
Number of cycles run: 979  
Number of cycles run: 3265  
Number of cycles run: 3438  
Number of cycles run: 3807  
Number of cycles run: 2194  
Number of cycles run: 1182  
Number of cycles run: 814  
Number of cycles run: 3126  
Number of cycles run: 922  
Number of cycles run: 1487  
Number of cycles run: 993  
Number of cycles run: 1379  
Number of cycles run: 50000  
Number of cycles run: 2662  
Number of cycles run: 3569  
Number of cycles run: 987  
Number of cycles run: 2360  
Number of cycles run: 24354  
Number of cycles run: 835  
Number of cycles run: 1887  
Number of cycles run: 5088  
Number of cycles run: 804  
Number of cycles run: 1831  
Number of cycles run: 8051  
Number of cycles run: 17944  
Number of cycles run: 1296  
Av cycles for attraction strength 0.8 is 4439  
standard diviation is 7843.9260379075  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 3011  
Number of cycles run: 1431  
Number of cycles run: 836  
Number of cycles run: 12441  
Number of cycles run: 1980  
Number of cycles run: 2304  
Number of cycles run: 2909  
Number of cycles run: 1327  
Number of cycles run: 2436  
Number of cycles run: 2118  
Number of cycles run: 857  
Number of cycles run: 1268  
Number of cycles run: 21700  
Number of cycles run: 2770  
Number of cycles run: 1939  
Number of cycles run: 5558  
Number of cycles run: 1938  
Number of cycles run: 1307  
Number of cycles run: 821  
Number of cycles run: 1890  
Number of cycles run: 1771  
Number of cycles run: 1513  
Number of cycles run: 2444  
Number of cycles run: 4021  
Number of cycles run: 2370  
Number of cycles run: 1455  
Number of cycles run: 2915

Number of cycles run: 3781  
Number of cycles run: 3452  
Number of cycles run: 2875  
Number of cycles run: 4542  
Number of cycles run: 757  
Number of cycles run: 1150  
Number of cycles run: 2295  
Number of cycles run: 1736  
Number of cycles run: 35409  
Number of cycles run: 882  
Number of cycles run: 1754  
Number of cycles run: 5787  
Number of cycles run: 7208  
Number of cycles run: 797  
Number of cycles run: 1341  
Number of cycles run: 4036  
Number of cycles run: 5671  
Number of cycles run: 4398  
Number of cycles run: 2760  
Number of cycles run: 1105  
Number of cycles run: 3790  
Number of cycles run: 50000  
Number of cycles run: 918  
Av cycles for attraction strength 0.8 is 4675  
standard diviation is 8660.45861829405  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 1721  
Number of cycles run: 2662  
Number of cycles run: 10119  
Number of cycles run: 2963  
Number of cycles run: 1996  
Number of cycles run: 3937  
Number of cycles run: 1293  
Number of cycles run: 1098  
Number of cycles run: 761  
Number of cycles run: 4130  
Number of cycles run: 4178  
Number of cycles run: 2608  
Number of cycles run: 15850  
Number of cycles run: 3263  
Number of cycles run: 2109  
Number of cycles run: 1699  
Number of cycles run: 3301  
Number of cycles run: 2495  
Number of cycles run: 1969  
Number of cycles run: 3795  
Number of cycles run: 2066  
Number of cycles run: 4537  
Number of cycles run: 826  
Number of cycles run: 2012  
Number of cycles run: 1350  
Number of cycles run: 759  
Number of cycles run: 49186  
Number of cycles run: 1877  
Number of cycles run: 2245  
Number of cycles run: 2556  
Number of cycles run: 1064  
Number of cycles run: 1562  
Number of cycles run: 2420  
Number of cycles run: 2554  
Number of cycles run: 1838  
Number of cycles run: 888  
Number of cycles run: 4536  
Number of cycles run: 2223  
Number of cycles run: 1351  
Number of cycles run: 11195  
Number of cycles run: 2648  
Number of cycles run: 1456  
Number of cycles run: 969  
Number of cycles run: 1457  
Number of cycles run: 817  
Number of cycles run: 1033  
Number of cycles run: 5277  
Number of cycles run: 1888  
Number of cycles run: 4904  
Number of cycles run: 1097  
Av cycles for attraction strength 0.8 is 3810  
standard diviation is 7105.197334748295  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 769  
Number of cycles run: 1050  
Number of cycles run: 4349  
Number of cycles run: 1623  
Number of cycles run: 2704  
Number of cycles run: 1870  
Number of cycles run: 26344  
Number of cycles run: 1048  
Number of cycles run: 50000  
Number of cycles run: 1881  
Number of cycles run: 2665  
Number of cycles run: 1573  
Number of cycles run: 3109  
Number of cycles run: 5741  
Number of cycles run: 3182  
Number of cycles run: 2228  
Number of cycles run: 50000  
Number of cycles run: 2886  
Number of cycles run: 956  
Number of cycles run: 12223  
Number of cycles run: 2712  
Number of cycles run: 4514  
Number of cycles run: 3044  
Number of cycles run: 2133  
Number of cycles run: 1971  
Number of cycles run: 2859  
Number of cycles run: 10517  
Number of cycles run: 764  
Number of cycles run: 2913  
Number of cycles run: 3566  
Number of cycles run: 1113  
Number of cycles run: 1852  
Number of cycles run: 2558  
Number of cycles run: 7117  
Number of cycles run: 2079  
Number of cycles run: 3073  
Number of cycles run: 1947  
Number of cycles run: 1773  
Number of cycles run: 30649  
Number of cycles run: 3125  
Number of cycles run: 4305  
Number of cycles run: 12672  
Number of cycles run: 734  
Number of cycles run: 934  
Number of cycles run: 16028  
Number of cycles run: 1657  
Number of cycles run: 1718  
Number of cycles run: 2139  
Number of cycles run: 2746  
Number of cycles run: 877  
Av cycles for attraction strength 0.8 is 6205  
standard diviation is 10791.83573875385  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 9837  
Number of cycles run: 2196  
Number of cycles run: 5996  
Number of cycles run: 3000  
Number of cycles run: 931  
Number of cycles run: 1726  
Number of cycles run: 11285  
Number of cycles run: 841  
Number of cycles run: 960  
Number of cycles run: 5641  
Number of cycles run: 1542  
Number of cycles run: 3105  
Number of cycles run: 5183  
Number of cycles run: 1214  
Number of cycles run: 819  
Number of cycles run: 2699  
Number of cycles run: 1637  
Number of cycles run: 1325  
Number of cycles run: 1487  
Number of cycles run: 1717  
Number of cycles run: 3004  
Number of cycles run: 2079  
Number of cycles run: 2013  
Number of cycles run: 16305  
Number of cycles run: 3456  
Number of cycles run: 1546  
Number of cycles run: 2828  
Number of cycles run: 2768  
Number of cycles run: 1377  
Number of cycles run: 3773  
Number of cycles run: 1795  
Number of cycles run: 3057  
Number of cycles run: 2636  
Number of cycles run: 979  
Number of cycles run: 898  
Number of cycles run: 2377  
Number of cycles run: 2050  
Number of cycles run: 9058  
Number of cycles run: 1498  
Number of cycles run: 766  
Number of cycles run: 2487  
Number of cycles run: 32597  
Number of cycles run: 2448  
Number of cycles run: 50000  
Number of cycles run: 858  
Number of cycles run: 14468  
Number of cycles run: 4287  
Number of cycles run: 5394  
Number of cycles run: 759  
Number of cycles run: 13035  
Av cycles for attraction strength 0.8 is 5074  
standard diviation is 8487.199157747233  
Testing average cycles for attraction strength 0.8  
Number of cycles run: 1208  
Number of cycles run: 2720  
Number of cycles run: 2791  
Number of cycles run: 825  
Number of cycles run: 1144  
Number of cycles run: 4396  
Number of cycles run: 1359  
Number of cycles run: 50000  
Number of cycles run: 823  
Number of cycles run: 6421  
Number of cycles run: 733  
Number of cycles run: 1070  
Number of cycles run: 4178  
Number of cycles run: 2234  
Number of cycles run: 1634  
Number of cycles run: 790  
Number of cycles run: 4689  
Number of cycles run: 1351  
Number of cycles run: 2044  
Number of cycles run: 1703  
Number of cycles run: 1461  
Number of cycles run: 1788  
Number of cycles run: 1023  
Number of cycles run: 1025  
Number of cycles run: 1688  
Number of cycles run: 4390  
Number of cycles run: 1003  
Number of cycles run: 8138  
Number of cycles run: 50000  
Number of cycles run: 1883  
Number of cycles run: 5573  
Number of cycles run: 1091  
Number of cycles run: 2315  
Number of cycles run: 1785  
Number of cycles run: 11072  
Number of cycles run: 2091  
Number of cycles run: 2245  
Number of cycles run: 1582  
Number of cycles run: 5340  
Number of cycles run: 913  
Number of cycles run: 1012  
Number of cycles run: 1220  
Number of cycles run: 3192  
Number of cycles run: 1851  
Number of cycles run: 7991  
Number of cycles run: 772  
Number of cycles run: 3572  
Number of cycles run: 7385  
Number of cycles run: 4139  
Number of cycles run: 21225  
Av cycles for attraction strength 0.8 is 5017  
standard diviation is 9899.20382731328