Testing average cycles for attraction strength 1.4  
Number of cycles run: 2383  
Number of cycles run: 897  
Number of cycles run: 773  
Number of cycles run: 829  
Number of cycles run: 1780  
Number of cycles run: 5267  
Number of cycles run: 1324  
Number of cycles run: 1115  
Number of cycles run: 4764  
Number of cycles run: 2849  
Number of cycles run: 13115  
Number of cycles run: 11461  
Number of cycles run: 2490  
Number of cycles run: 1523  
Number of cycles run: 1271  
Number of cycles run: 1573  
Number of cycles run: 753  
Number of cycles run: 1251  
Number of cycles run: 1688  
Number of cycles run: 1422  
Number of cycles run: 979  
Number of cycles run: 1823  
Number of cycles run: 3096  
Number of cycles run: 7187  
Number of cycles run: 2437  
Number of cycles run: 2950  
Number of cycles run: 1761  
Number of cycles run: 5717  
Number of cycles run: 2135  
Number of cycles run: 12393  
Number of cycles run: 5708  
Number of cycles run: 2525  
Number of cycles run: 734  
Number of cycles run: 1805  
Number of cycles run: 845  
Number of cycles run: 863  
Number of cycles run: 3980  
Number of cycles run: 1766  
Number of cycles run: 2038  
Number of cycles run: 5028  
Number of cycles run: 734  
Number of cycles run: 5934  
Number of cycles run: 2162  
Number of cycles run: 1330  
Number of cycles run: 2913  
Number of cycles run: 4991  
Number of cycles run: 925  
Number of cycles run: 2607  
Number of cycles run: 749  
Number of cycles run: 3772  
Av cycles for attraction strength 1.4 is 3008  
standard diviation is 2884.482461626101  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 2096  
Number of cycles run: 720  
Number of cycles run: 2521  
Number of cycles run: 1909  
Number of cycles run: 3128  
Number of cycles run: 1266  
Number of cycles run: 1095  
Number of cycles run: 20249  
Number of cycles run: 1958  
Number of cycles run: 733  
Number of cycles run: 764  
Number of cycles run: 1346  
Number of cycles run: 1252  
Number of cycles run: 1052  
Number of cycles run: 3321  
Number of cycles run: 16992  
Number of cycles run: 2731  
Number of cycles run: 784  
Number of cycles run: 1200  
Number of cycles run: 720  
Number of cycles run: 2172  
Number of cycles run: 5579  
Number of cycles run: 1291  
Number of cycles run: 1438  
Number of cycles run: 3570  
Number of cycles run: 999  
Number of cycles run: 1045  
Number of cycles run: 1234  
Number of cycles run: 4990  
Number of cycles run: 829  
Number of cycles run: 1483  
Number of cycles run: 2372  
Number of cycles run: 1564  
Number of cycles run: 1991  
Number of cycles run: 2365  
Number of cycles run: 1776  
Number of cycles run: 5433  
Number of cycles run: 1559  
Number of cycles run: 1352  
Number of cycles run: 1435  
Number of cycles run: 1573  
Number of cycles run: 829  
Number of cycles run: 1068  
Number of cycles run: 650  
Number of cycles run: 4581  
Number of cycles run: 1005  
Number of cycles run: 764  
Number of cycles run: 899  
Number of cycles run: 1940  
Number of cycles run: 1201  
Av cycles for attraction strength 1.4 is 2496  
standard diviation is 3553.6327503108187  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 767  
Number of cycles run: 2698  
Number of cycles run: 750  
Number of cycles run: 852  
Number of cycles run: 4328  
Number of cycles run: 1766  
Number of cycles run: 1169  
Number of cycles run: 1893  
Number of cycles run: 5762  
Number of cycles run: 1319  
Number of cycles run: 15127  
Number of cycles run: 3140  
Number of cycles run: 1348  
Number of cycles run: 1183  
Number of cycles run: 1898  
Number of cycles run: 1247  
Number of cycles run: 1365  
Number of cycles run: 43417  
Number of cycles run: 1169  
Number of cycles run: 663  
Number of cycles run: 920  
Number of cycles run: 2539  
Number of cycles run: 2088  
Number of cycles run: 8638  
Number of cycles run: 3058  
Number of cycles run: 50000  
Number of cycles run: 1622  
Number of cycles run: 11864  
Number of cycles run: 6138  
Number of cycles run: 1186  
Number of cycles run: 1702  
Number of cycles run: 4674  
Number of cycles run: 775  
Number of cycles run: 786  
Number of cycles run: 1713  
Number of cycles run: 2580  
Number of cycles run: 786  
Number of cycles run: 2826  
Number of cycles run: 1707  
Number of cycles run: 2071  
Number of cycles run: 2505  
Number of cycles run: 944  
Number of cycles run: 759  
Number of cycles run: 2727  
Number of cycles run: 7022  
Number of cycles run: 1147  
Number of cycles run: 1437  
Number of cycles run: 3188  
Number of cycles run: 4211  
Number of cycles run: 2835  
Av cycles for attraction strength 1.4 is 4526  
standard diviation is 9164.697807659251  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 3076  
Number of cycles run: 1385  
Number of cycles run: 1643  
Number of cycles run: 1685  
Number of cycles run: 2406  
Number of cycles run: 1257  
Number of cycles run: 1198  
Number of cycles run: 1319  
Number of cycles run: 3139  
Number of cycles run: 3510  
Number of cycles run: 735  
Number of cycles run: 2264  
Number of cycles run: 2623  
Number of cycles run: 2365  
Number of cycles run: 952  
Number of cycles run: 4053  
Number of cycles run: 4261  
Number of cycles run: 2994  
Number of cycles run: 1053  
Number of cycles run: 1655  
Number of cycles run: 829  
Number of cycles run: 16839  
Number of cycles run: 2022  
Number of cycles run: 3520  
Number of cycles run: 1102  
Number of cycles run: 8059  
Number of cycles run: 1471  
Number of cycles run: 2024  
Number of cycles run: 13125  
Number of cycles run: 1120  
Number of cycles run: 1624  
Number of cycles run: 50000  
Number of cycles run: 1518  
Number of cycles run: 2720  
Number of cycles run: 777  
Number of cycles run: 868  
Number of cycles run: 1439  
Number of cycles run: 1652  
Number of cycles run: 848  
Number of cycles run: 5915  
Number of cycles run: 1605  
Number of cycles run: 3071  
Number of cycles run: 2746  
Number of cycles run: 936  
Number of cycles run: 899  
Number of cycles run: 838  
Number of cycles run: 3990  
Number of cycles run: 1996  
Number of cycles run: 888  
Number of cycles run: 876  
Av cycles for attraction strength 1.4 is 3577  
standard diviation is 7312.6974028823615  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 704  
Number of cycles run: 5839  
Number of cycles run: 1420  
Number of cycles run: 977  
Number of cycles run: 2017  
Number of cycles run: 1479  
Number of cycles run: 6063  
Number of cycles run: 3090  
Number of cycles run: 4804  
Number of cycles run: 920  
Number of cycles run: 1213  
Number of cycles run: 939  
Number of cycles run: 1446  
Number of cycles run: 921  
Number of cycles run: 1080  
Number of cycles run: 48447  
Number of cycles run: 2973  
Number of cycles run: 2282  
Number of cycles run: 1409  
Number of cycles run: 858  
Number of cycles run: 1647  
Number of cycles run: 3548  
Number of cycles run: 1166  
Number of cycles run: 2024  
Number of cycles run: 799  
Number of cycles run: 888  
Number of cycles run: 3967  
Number of cycles run: 743  
Number of cycles run: 1170  
Number of cycles run: 603  
Number of cycles run: 1619  
Number of cycles run: 1725  
Number of cycles run: 760  
Number of cycles run: 5867  
Number of cycles run: 6917  
Number of cycles run: 1274  
Number of cycles run: 2308  
Number of cycles run: 1699  
Number of cycles run: 19476  
Number of cycles run: 5828  
Number of cycles run: 981  
Number of cycles run: 4608  
Number of cycles run: 2267  
Number of cycles run: 915  
Number of cycles run: 6671  
Number of cycles run: 1541  
Number of cycles run: 50000  
Number of cycles run: 932  
Number of cycles run: 1238  
Number of cycles run: 4466  
Av cycles for attraction strength 1.4 is 4530  
standard diviation is 9696.672821254153  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 2091  
Number of cycles run: 1653  
Number of cycles run: 10685  
Number of cycles run: 2149  
Number of cycles run: 870  
Number of cycles run: 1527  
Number of cycles run: 794  
Number of cycles run: 1780  
Number of cycles run: 11738  
Number of cycles run: 2852  
Number of cycles run: 708  
Number of cycles run: 837  
Number of cycles run: 2557  
Number of cycles run: 802  
Number of cycles run: 2539  
Number of cycles run: 5285  
Number of cycles run: 1818  
Number of cycles run: 866  
Number of cycles run: 2196  
Number of cycles run: 4952  
Number of cycles run: 1000  
Number of cycles run: 707  
Number of cycles run: 876  
Number of cycles run: 1855  
Number of cycles run: 1691  
Number of cycles run: 2464  
Number of cycles run: 1628  
Number of cycles run: 1138

Number of cycles run: 1757  
Number of cycles run: 2181  
Number of cycles run: 822  
Number of cycles run: 7126  
Number of cycles run: 2324  
Number of cycles run: 971  
Number of cycles run: 1118  
Number of cycles run: 1368  
Number of cycles run: 3896  
Number of cycles run: 1446  
Number of cycles run: 1351  
Number of cycles run: 1617  
Number of cycles run: 1115  
Number of cycles run: 6910  
Number of cycles run: 1361  
Number of cycles run: 4831  
Number of cycles run: 2209  
Number of cycles run: 3165  
Number of cycles run: 5632  
Number of cycles run: 2381  
Number of cycles run: 809  
Number of cycles run: 1967  
Av cycles for attraction strength 1.4 is 2528  
standard diviation is 2370.2656206098295  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 2361  
Number of cycles run: 2914  
Number of cycles run: 1779  
Number of cycles run: 3598  
Number of cycles run: 1873  
Number of cycles run: 898  
Number of cycles run: 2412  
Number of cycles run: 1194  
Number of cycles run: 768  
Number of cycles run: 1811  
Number of cycles run: 793  
Number of cycles run: 781  
Number of cycles run: 4341  
Number of cycles run: 958  
Number of cycles run: 8051  
Number of cycles run: 3632  
Number of cycles run: 2960  
Number of cycles run: 1218  
Number of cycles run: 1870  
Number of cycles run: 1703  
Number of cycles run: 1637  
Number of cycles run: 772  
Number of cycles run: 11117  
Number of cycles run: 5978  
Number of cycles run: 2765  
Number of cycles run: 10434  
Number of cycles run: 1662  
Number of cycles run: 2736  
Number of cycles run: 783  
Number of cycles run: 828  
Number of cycles run: 2398  
Number of cycles run: 1403  
Number of cycles run: 18470  
Number of cycles run: 2018  
Number of cycles run: 1048  
Number of cycles run: 1562  
Number of cycles run: 1855  
Number of cycles run: 736  
Number of cycles run: 1265  
Number of cycles run: 952  
Number of cycles run: 5667  
Number of cycles run: 38398  
Number of cycles run: 782  
Number of cycles run: 818  
Number of cycles run: 50000  
Number of cycles run: 2476  
Number of cycles run: 705  
Number of cycles run: 973  
Number of cycles run: 2093  
Number of cycles run: 1061  
Av cycles for attraction strength 1.4 is 4386  
standard diviation is 8891.463142629265  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 2101  
Number of cycles run: 1149  
Number of cycles run: 1058  
Number of cycles run: 1488  
Number of cycles run: 3998  
Number of cycles run: 1784  
Number of cycles run: 976  
Number of cycles run: 846  
Number of cycles run: 778  
Number of cycles run: 1209  
Number of cycles run: 50000  
Number of cycles run: 1668  
Number of cycles run: 880  
Number of cycles run: 50000  
Number of cycles run: 2912  
Number of cycles run: 1583  
Number of cycles run: 1050  
Number of cycles run: 1451  
Number of cycles run: 704  
Number of cycles run: 2869  
Number of cycles run: 861  
Number of cycles run: 769  
Number of cycles run: 950  
Number of cycles run: 10742  
Number of cycles run: 3315  
Number of cycles run: 1170  
Number of cycles run: 747  
Number of cycles run: 1623  
Number of cycles run: 8337  
Number of cycles run: 867  
Number of cycles run: 900  
Number of cycles run: 792  
Number of cycles run: 26968  
Number of cycles run: 865  
Number of cycles run: 2582  
Number of cycles run: 2013  
Number of cycles run: 3915  
Number of cycles run: 2981  
Number of cycles run: 1573  
Number of cycles run: 4224  
Number of cycles run: 1461  
Number of cycles run: 1131  
Number of cycles run: 2470  
Number of cycles run: 764  
Number of cycles run: 731  
Number of cycles run: 1139  
Number of cycles run: 1311  
Number of cycles run: 4140  
Number of cycles run: 724  
Number of cycles run: 923  
Av cycles for attraction strength 1.4 is 4389  
standard diviation is 10217.249470840366  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 2457  
Number of cycles run: 2992  
Number of cycles run: 6052  
Number of cycles run: 2471  
Number of cycles run: 1464  
Number of cycles run: 3819  
Number of cycles run: 1061  
Number of cycles run: 2023  
Number of cycles run: 1598  
Number of cycles run: 919  
Number of cycles run: 717  
Number of cycles run: 2739  
Number of cycles run: 1259  
Number of cycles run: 819  
Number of cycles run: 3469  
Number of cycles run: 900  
Number of cycles run: 4797  
Number of cycles run: 1045  
Number of cycles run: 2663  
Number of cycles run: 788  
Number of cycles run: 719  
Number of cycles run: 5180  
Number of cycles run: 4786  
Number of cycles run: 792  
Number of cycles run: 1825  
Number of cycles run: 3354  
Number of cycles run: 1344  
Number of cycles run: 2194  
Number of cycles run: 44566  
Number of cycles run: 787  
Number of cycles run: 724  
Number of cycles run: 14461  
Number of cycles run: 1253  
Number of cycles run: 942  
Number of cycles run: 790  
Number of cycles run: 2265  
Number of cycles run: 882  
Number of cycles run: 2131  
Number of cycles run: 1740  
Number of cycles run: 890  
Number of cycles run: 2847  
Number of cycles run: 2208  
Number of cycles run: 3174  
Number of cycles run: 14174  
Number of cycles run: 2269  
Number of cycles run: 795  
Number of cycles run: 945  
Number of cycles run: 847  
Number of cycles run: 50000  
Number of cycles run: 2352  
Av cycles for attraction strength 1.4 is 4305  
standard diviation is 9295.296615262703  
Testing average cycles for attraction strength 1.4  
Number of cycles run: 3578  
Number of cycles run: 15642  
Number of cycles run: 1658  
Number of cycles run: 640  
Number of cycles run: 996  
Number of cycles run: 713  
Number of cycles run: 768  
Number of cycles run: 1871  
Number of cycles run: 1620  
Number of cycles run: 2979  
Number of cycles run: 9052  
Number of cycles run: 25105  
Number of cycles run: 760  
Number of cycles run: 2409  
Number of cycles run: 1964  
Number of cycles run: 2504  
Number of cycles run: 914  
Number of cycles run: 754  
Number of cycles run: 7814  
Number of cycles run: 1188  
Number of cycles run: 796  
Number of cycles run: 50000  
Number of cycles run: 2385  
Number of cycles run: 5484  
Number of cycles run: 703  
Number of cycles run: 1299  
Number of cycles run: 1803  
Number of cycles run: 860  
Number of cycles run: 959  
Number of cycles run: 834  
Number of cycles run: 2209  
Number of cycles run: 1833  
Number of cycles run: 48924  
Number of cycles run: 815  
Number of cycles run: 1399  
Number of cycles run: 5205  
Number of cycles run: 764  
Number of cycles run: 7302  
Number of cycles run: 1708  
Number of cycles run: 50000  
Number of cycles run: 2086  
Number of cycles run: 2688  
Number of cycles run: 747  
Number of cycles run: 1529  
Number of cycles run: 826  
Number of cycles run: 2175  
Number of cycles run: 811  
Number of cycles run: 1975  
Number of cycles run: 740  
Number of cycles run: 50000  
Av cycles for attraction strength 1.4 is 6635  
standard diviation is 13496.89646043391