Testing average cycles for leadership strength 0.5  
the leader1 dead using 989  
Number of cycles run: 17525  
  
  
the leader1 dead using 5543  
the leader1 dead using 5543  
Number of cycles run: 8185  
  
  
the leader1 dead using 2988  
Number of cycles run: 8021  
  
  
Number of cycles run: 8991  
  
  
the leader1 dead using 8687  
the leader1 dead using 8687  
Number of cycles run: 9460  
  
  
the leader1 dead using 2182  
the leader1 dead using 2182  
the leader1 dead using 2182  
the leader1 dead using 2182  
Number of cycles run: 12939  
  
  
the leader1 dead using 12037  
Number of cycles run: 13983  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4999  
the leader1 dead using 4999  
Number of cycles run: 50000  
  
  
Number of cycles run: 9831  
  
  
the leader1 dead using 740  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 8578  
Number of cycles run: 8964  
  
  
the leader1 dead using 2355  
Number of cycles run: 12487  
  
  
the leader1 dead using 47457  
Number of cycles run: 50000  
  
  
the leader1 dead using 3119  
the leader1 dead using 3119  
the leader1 dead using 3119  
the leader1 dead using 3119  
Number of cycles run: 50000  
  
  
the leader1 dead using 8034  
the leader1 dead using 8034  
Number of cycles run: 9661  
  
  
the leader1 dead using 17397  
Number of cycles run: 50000  
  
  
the leader1 dead using 1755  
the leader1 dead using 1755  
Number of cycles run: 50000  
  
  
the leader1 dead using 8976  
Number of cycles run: 49870  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 18925  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 12536  
  
  
the leader1 dead using 17493  
the leader1 dead using 17493  
the leader1 dead using 17493  
Number of cycles run: 33067  
  
  
the leader1 dead using 2919  
Number of cycles run: 8361  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5167  
Number of cycles run: 50000  
  
  
the leader1 dead using 6905  
Number of cycles run: 50000  
  
  
the leader1 dead using 5506  
Number of cycles run: 32900  
  
  
Number of cycles run: 13694  
  
  
the leader1 dead using 6868  
the leader1 dead using 6868  
Number of cycles run: 27319  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5942  
Number of cycles run: 8124  
  
  
the leader1 dead using 6494  
the leader1 dead using 6494  
the leader1 dead using 6494  
Number of cycles run: 20270  
  
  
the leader1 dead using 5858  
the leader1 dead using 5858  
the leader1 dead using 5858  
Number of cycles run: 10222  
  
  
the leader1 dead using 9090  
Number of cycles run: 11121  
  
  
the leader1 dead using 8051  
Number of cycles run: 8330  
  
  
the leader1 dead using 7986  
Number of cycles run: 7986  
  
  
the leader1 dead using 1819  
the leader1 dead using 1819  
the leader1 dead using 1819  
Number of cycles run: 27383  
  
  
the leader1 dead using 9368  
the leader1 dead using 9368  
Number of cycles run: 12179  
  
  
the leader1 dead using 9984  
Number of cycles run: 15833  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 3427  
the leader1 dead using 3427  
Number of cycles run: 8611  
  
  
the leader1 dead using 4542  
the leader1 dead using 4542  
Number of cycles run: 7670  
  
  
the leader1 dead using 7077  
Number of cycles run: 15195  
  
  
the leader1 dead using 5590  
the leader1 dead using 5590  
Number of cycles run: 6774  
  
  
the leader1 dead using 5595  
the leader1 dead using 5595  
the leader1 dead using 5595  
Number of cycles run: 8300  
  
  
the leader1 dead using 4170  
the leader1 dead using 4170  
Number of cycles run: 43769  
  
  
Av cycles for leadership strength 0.5 is 26569  
standard diviation is 18441.203595276773  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 889  
the leader1 dead using 889  
Number of cycles run: 26169  
  
  
the leader1 dead using 5080  
Number of cycles run: 50000  
  
  
Number of cycles run: 14989  
  
  
the leader1 dead using 1123  
Number of cycles run: 50000  
  
  
the leader1 dead using 762  
the leader1 dead using 762  
the leader1 dead using 762  
the leader1 dead using 762  
the leader1 dead using 762  
Number of cycles run: 18123  
  
  
the leader1 dead using 1684  
Number of cycles run: 50000  
  
  
the leader1 dead using 12521  
Number of cycles run: 25441  
  
  
the leader1 dead using 21123  
the leader1 dead using 21123  
the leader1 dead using 21123  
the leader1 dead using 21123  
Number of cycles run: 28804  
  
  
the leader1 dead using 5764  
the leader1 dead using 5764  
the leader1 dead using 5764  
the leader1 dead using 5764  
Number of cycles run: 10616  
  
  
Number of cycles run: 6488  
  
  
the leader1 dead using 1039  
Number of cycles run: 8407  
  
  
the leader1 dead using 13771  
Number of cycles run: 50000  
  
  
the leader1 dead using 34681  
Number of cycles run: 50000  
  
  
the leader1 dead using 7879  
the leader1 dead using 7879  
Number of cycles run: 9382  
  
  
the leader1 dead using 7332  
Number of cycles run: 50000  
  
  
the leader1 dead using 3494  
the leader1 dead using 3494  
Number of cycles run: 50000  
  
  
the leader1 dead using 4214  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 3459  
the leader1 dead using 3459  
the leader1 dead using 3459  
Number of cycles run: 9223  
  
  
the leader1 dead using 6500  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 21884  
  
  
the leader1 dead using 6403  
the leader1 dead using 6403  
the leader1 dead using 6403  
Number of cycles run: 39209  
  
  
the leader1 dead using 7261  
the leader1 dead using 7261  
Number of cycles run: 20924  
  
  
the leader1 dead using 5995  
Number of cycles run: 9102  
  
  
the leader1 dead using 2631  
the leader1 dead using 2631  
Number of cycles run: 11601  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 1222  
the leader1 dead using 1222  
the leader1 dead using 1222  
the leader1 dead using 1222  
Number of cycles run: 13896  
  
  
the leader1 dead using 5838  
the leader1 dead using 5838  
Number of cycles run: 18339  
  
  
the leader1 dead using 6610  
Number of cycles run: 7335  
  
  
the leader1 dead using 2068  
the leader1 dead using 2068  
the leader1 dead using 2068  
the leader1 dead using 2068  
Number of cycles run: 9310  
  
  
the leader1 dead using 1418  
Number of cycles run: 12570  
  
  
Number of cycles run: 7496  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 1186  
Number of cycles run: 50000  
  
  
the leader1 dead using 9114  
Number of cycles run: 11365  
  
  
Number of cycles run: 17050  
  
  
the leader1 dead using 2344  
the leader1 dead using 2344  
the leader1 dead using 2344  
the leader1 dead using 2344  
the leader1 dead using 2344  
the leader1 dead using 2344  
Number of cycles run: 28240  
  
  
the leader1 dead using 3734  
Number of cycles run: 18646  
  
  
the leader1 dead using 2376  
the leader1 dead using 2376  
the leader1 dead using 2376  
the leader1 dead using 2376  
the leader1 dead using 2376  
Number of cycles run: 6987  
  
  
Number of cycles run: 10301  
  
  
the leader1 dead using 1176  
Number of cycles run: 50000  
  
  
the leader1 dead using 2164  
the leader1 dead using 2164  
Number of cycles run: 50000  
  
  
the leader1 dead using 15940  
Number of cycles run: 16352  
  
  
the leader1 dead using 5477  
the leader1 dead using 5477  
Number of cycles run: 39262  
  
  
the leader1 dead using 2879  
Number of cycles run: 50000  
  
  
the leader1 dead using 8589  
Number of cycles run: 10767  
  
  
the leader1 dead using 3604  
the leader1 dead using 3604  
Number of cycles run: 8899  
  
  
the leader1 dead using 6869  
the leader1 dead using 6869  
Number of cycles run: 50000  
  
  
Number of cycles run: 8323  
  
  
Av cycles for leadership strength 0.5 is 28110  
standard diviation is 18043.95816344301  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 5845  
Number of cycles run: 9487  
  
  
Number of cycles run: 16446  
  
  
the leader1 dead using 7294  
the leader1 dead using 7294  
Number of cycles run: 9425  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 7317  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 7152  
the leader1 dead using 7152  
the leader1 dead using 7152  
the leader1 dead using 7152  
Number of cycles run: 12023  
  
  
the leader1 dead using 6773  
the leader1 dead using 6773  
Number of cycles run: 9982  
  
  
the leader1 dead using 2794  
the leader1 dead using 2794  
Number of cycles run: 50000  
  
  
the leader1 dead using 1327  
the leader1 dead using 1327  
Number of cycles run: 50000  
  
  
the leader1 dead using 3423  
the leader1 dead using 3423

the leader1 dead using 3423  
the leader1 dead using 3423  
Number of cycles run: 20052  
  
  
the leader1 dead using 7221  
the leader1 dead using 7221  
the leader1 dead using 7221  
the leader1 dead using 7221  
Number of cycles run: 50000  
  
  
the leader1 dead using 10277  
Number of cycles run: 10554  
  
  
the leader1 dead using 5210  
the leader1 dead using 5210  
Number of cycles run: 8874  
  
  
the leader1 dead using 8013  
Number of cycles run: 50000  
  
  
the leader1 dead using 5456  
the leader1 dead using 5456  
the leader1 dead using 5456  
the leader1 dead using 5456  
Number of cycles run: 11005  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4532  
the leader1 dead using 4532  
Number of cycles run: 8668  
  
  
Number of cycles run: 10915  
  
  
the leader1 dead using 28489  
Number of cycles run: 29910  
  
  
the leader1 dead using 8206  
Number of cycles run: 11448  
  
  
the leader1 dead using 7690  
the leader1 dead using 7690  
Number of cycles run: 10476  
  
  
the leader1 dead using 5521  
Number of cycles run: 10594  
  
  
the leader1 dead using 2952  
the leader1 dead using 2952  
Number of cycles run: 8245  
  
  
the leader1 dead using 10633  
the leader1 dead using 10633  
Number of cycles run: 13097  
  
  
the leader1 dead using 3376  
the leader1 dead using 3376  
the leader1 dead using 3376  
Number of cycles run: 10895  
  
  
the leader1 dead using 6581  
Number of cycles run: 13078  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5653  
the leader1 dead using 5653  
the leader1 dead using 5653  
Number of cycles run: 12560  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2534  
Number of cycles run: 32549  
  
  
the leader1 dead using 4408  
the leader1 dead using 4408  
Number of cycles run: 50000  
  
  
the leader1 dead using 3693  
the leader1 dead using 3693  
the leader1 dead using 3693  
the leader1 dead using 3693  
the leader1 dead using 3693  
Number of cycles run: 14268  
  
  
the leader1 dead using 38530  
Number of cycles run: 38844  
  
  
the leader1 dead using 3435  
Number of cycles run: 7823  
  
  
the leader1 dead using 5633  
Number of cycles run: 9272  
  
  
the leader1 dead using 711  
Number of cycles run: 24615  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 6832  
Number of cycles run: 9058  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2313  
the leader1 dead using 2313  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 14696  
Number of cycles run: 50000  
  
  
the leader1 dead using 7721  
the leader1 dead using 7721  
the leader1 dead using 7721  
the leader1 dead using 7721  
the leader1 dead using 7721  
Number of cycles run: 14425  
  
  
the leader1 dead using 13673  
Number of cycles run: 15381  
  
  
the leader1 dead using 5096  
the leader1 dead using 5096  
Number of cycles run: 8558  
  
  
the leader1 dead using 3518  
the leader1 dead using 3518  
the leader1 dead using 3518  
the leader1 dead using 3518  
the leader1 dead using 3518  
Number of cycles run: 50000  
  
  
Number of cycles run: 17773  
  
  
Av cycles for leadership strength 0.5 is 27806  
standard diviation is 18526.21872605725  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 14650  
Number of cycles run: 50000  
  
  
the leader1 dead using 361  
Number of cycles run: 6829  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 16972  
Number of cycles run: 16972  
  
  
the leader1 dead using 7930  
the leader1 dead using 7930  
Number of cycles run: 19683  
  
  
the leader1 dead using 3016  
the leader1 dead using 3016  
the leader1 dead using 3016  
the leader1 dead using 3016  
Number of cycles run: 21028  
  
  
the leader1 dead using 5235  
the leader1 dead using 5235  
Number of cycles run: 7663  
  
  
the leader1 dead using 25798  
the leader1 dead using 25798  
Number of cycles run: 50000  
  
  
Number of cycles run: 9103  
  
  
the leader1 dead using 8305  
Number of cycles run: 23619  
  
  
the leader1 dead using 13550  
the leader1 dead using 13550  
Number of cycles run: 23422  
  
  
the leader1 dead using 4459  
Number of cycles run: 50000  
  
  
the leader1 dead using 1223  
the leader1 dead using 1223  
the leader1 dead using 1223  
Number of cycles run: 10107  
  
  
the leader1 dead using 3153  
Number of cycles run: 10331  
  
  
the leader1 dead using 6033  
the leader1 dead using 6033  
Number of cycles run: 9186  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4072  
the leader1 dead using 4072  
Number of cycles run: 50000  
  
  
the leader1 dead using 9313  
Number of cycles run: 14029  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5429  
Number of cycles run: 50000  
  
  
the leader1 dead using 4374  
Number of cycles run: 10120  
  
  
the leader1 dead using 8432  
Number of cycles run: 8868  
  
  
the leader1 dead using 4919  
Number of cycles run: 18764  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4075  
Number of cycles run: 7688  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 7955  
Number of cycles run: 12410  
  
  
the leader1 dead using 30625  
the leader1 dead using 30625  
Number of cycles run: 33751  
  
  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
the leader1 dead using 6219  
Number of cycles run: 11064  
  
  
the leader1 dead using 31957  
Number of cycles run: 50000  
  
  
Number of cycles run: 8706  
  
  
the leader1 dead using 8706  
the leader1 dead using 8706  
the leader1 dead using 8706  
Number of cycles run: 9779  
  
  
the leader1 dead using 6489  
Number of cycles run: 8429  
  
  
the leader1 dead using 5698  
the leader1 dead using 5698  
Number of cycles run: 7825  
  
  
the leader1 dead using 12152  
Number of cycles run: 50000  
  
  
the leader1 dead using 475  
Number of cycles run: 27662  
  
  
the leader1 dead using 7205  
Number of cycles run: 16751  
  
  
the leader1 dead using 7641  
the leader1 dead using 7641  
Number of cycles run: 41874  
  
  
the leader1 dead using 5681  
the leader1 dead using 5681  
the leader1 dead using 5681  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4383  
the leader1 dead using 4383  
Number of cycles run: 8346  
  
  
the leader1 dead using 5344  
the leader1 dead using 5344  
Number of cycles run: 8262  
  
  
the leader1 dead using 3406  
the leader1 dead using 3406  
Number of cycles run: 28032  
  
  
the leader1 dead using 10489  
the leader1 dead using 10489  
Number of cycles run: 13057  
  
  
the leader1 dead using 6530  
Number of cycles run: 9195  
  
  
the leader1 dead using 7639  
Number of cycles run: 7639  
  
  
the leader1 dead using 884  
Number of cycles run: 8683  
  
  
the leader1 dead using 10933  
the leader1 dead using 10933  
Number of cycles run: 14373  
  
  
the leader1 dead using 2465  
the leader1 dead using 2465  
Number of cycles run: 50000  
  
  
the leader1 dead using 6798  
the leader1 dead using 6798  
the leader1 dead using 6798  
Number of cycles run: 7362  
  
  
Av cycles for leadership strength 0.5 is 25012  
standard diviation is 17960.144335541107  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 469  
Number of cycles run: 9080  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 9987  
Number of cycles run: 50000  
  
  
the leader1 dead using 13280  
Number of cycles run: 24957  
  
  
the leader1 dead using 5829  
the leader1 dead using 5829  
Number of cycles run: 7462  
  
  
the leader1 dead using 2849  
the leader1 dead using 2849  
the leader1 dead using 2849  
Number of cycles run: 50000  
  
  
the leader1 dead using 5535  
Number of cycles run: 8076  
  
  
the leader1 dead using 6809  
the leader1 dead using 6809  
the leader1 dead using 6809  
the leader1 dead using 6809  
Number of cycles run: 38275  
  
  
the leader1 dead using 9029  
Number of cycles run: 17876  
  
  
the leader1 dead using 3903  
the leader1 dead using 3903  
the leader1 dead using 3903  
the leader1 dead using 3903  
Number of cycles run: 34318  
  
  
the leader1 dead using 14223  
the leader1 dead using 14223  
Number of cycles run: 25556  
  
  
the leader1 dead using 1393  
the leader1 dead using 1393  
the leader1 dead using 1393  
Number of cycles run: 50000  
  
  
the leader1 dead using 6894  
the leader1 dead using 6894  
the leader1 dead using 6894  
the leader1 dead using 6894  
Number of cycles run: 14526  
  
  
the leader1 dead using 4119  
the leader1 dead using 4119  
the leader1 dead using 4119  
the leader1 dead using 4119  
Number of cycles run: 11452

the leader1 dead using 11104  
Number of cycles run: 11630  
  
  
the leader1 dead using 2555  
Number of cycles run: 50000  
  
  
Number of cycles run: 14636  
  
  
the leader1 dead using 645  
the leader1 dead using 645  
Number of cycles run: 8310  
  
  
the leader1 dead using 1495  
the leader1 dead using 1495  
Number of cycles run: 17706  
  
  
the leader1 dead using 8730  
Number of cycles run: 9853  
  
  
the leader1 dead using 5162  
Number of cycles run: 50000  
  
  
the leader1 dead using 5611  
Number of cycles run: 7163  
  
  
the leader1 dead using 2587  
Number of cycles run: 11268  
  
  
the leader1 dead using 3361  
Number of cycles run: 50000  
  
  
the leader1 dead using 4745  
the leader1 dead using 4745  
Number of cycles run: 8711  
  
  
the leader1 dead using 7456  
Number of cycles run: 11048  
  
  
the leader1 dead using 7482  
the leader1 dead using 7482  
Number of cycles run: 10290  
  
  
the leader1 dead using 496  
the leader1 dead using 496  
Number of cycles run: 8538  
  
  
the leader1 dead using 6768  
Number of cycles run: 10272  
  
  
Number of cycles run: 9914  
  
  
Number of cycles run: 16764  
  
  
the leader1 dead using 495  
the leader1 dead using 495  
the leader1 dead using 495  
the leader1 dead using 495  
Number of cycles run: 50000  
  
  
the leader1 dead using 21712  
the leader1 dead using 21712  
Number of cycles run: 37343  
  
  
the leader1 dead using 4363  
the leader1 dead using 4363  
the leader1 dead using 4363  
Number of cycles run: 50000  
  
  
the leader1 dead using 10661  
the leader1 dead using 10661  
Number of cycles run: 15038  
  
  
the leader1 dead using 6292  
the leader1 dead using 6292  
Number of cycles run: 50000  
  
  
Number of cycles run: 9232  
  
  
the leader1 dead using 10970  
the leader1 dead using 10970  
the leader1 dead using 10970  
Number of cycles run: 16366  
  
  
the leader1 dead using 12190  
the leader1 dead using 12190  
Number of cycles run: 50000  
  
  
the leader1 dead using 41600  
the leader1 dead using 41600  
Number of cycles run: 42254  
  
  
the leader1 dead using 12579  
Number of cycles run: 12579  
  
  
the leader1 dead using 921  
the leader1 dead using 921  
the leader1 dead using 921  
the leader1 dead using 921  
the leader1 dead using 921  
Number of cycles run: 31118  
  
  
the leader1 dead using 3202  
the leader1 dead using 3202  
the leader1 dead using 3202  
Number of cycles run: 8485  
  
  
the leader1 dead using 664  
the leader1 dead using 664  
Number of cycles run: 14639  
  
  
the leader1 dead using 11809  
Number of cycles run: 11809  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 9700  
the leader1 dead using 9700  
Number of cycles run: 10316  
  
  
the leader1 dead using 4493  
the leader1 dead using 4493  
the leader1 dead using 4493  
Number of cycles run: 50000  
  
  
the leader1 dead using 6197  
Number of cycles run: 50000  
  
  
the leader1 dead using 1286  
the leader1 dead using 1286  
the leader1 dead using 1286  
Number of cycles run: 12055  
  
  
Av cycles for leadership strength 0.5 is 25378  
standard diviation is 17503.888784542498  
Testing average cycles for leadership strength 0.5  
Number of cycles run: 8553  
  
  
Number of cycles run: 21127  
  
  
the leader1 dead using 4037  
the leader1 dead using 4037  
the leader1 dead using 4037  
the leader1 dead using 4037  
Number of cycles run: 13066  
  
  
the leader1 dead using 696  
the leader1 dead using 696  
the leader1 dead using 696  
Number of cycles run: 10373  
  
  
the leader1 dead using 8818  
Number of cycles run: 10008  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 3395  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 20318  
  
  
the leader1 dead using 3271  
Number of cycles run: 40729  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 7205  
Number of cycles run: 8645  
  
  
the leader1 dead using 2180  
the leader1 dead using 2180  
Number of cycles run: 15679  
  
  
the leader1 dead using 7209  
the leader1 dead using 7209  
the leader1 dead using 7209  
Number of cycles run: 10279  
  
  
the leader1 dead using 10722  
Number of cycles run: 10722  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5070  
the leader1 dead using 5070  
Number of cycles run: 50000  
  
  
the leader1 dead using 7503  
the leader1 dead using 7503  
Number of cycles run: 11602  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 7230  
the leader1 dead using 7230  
the leader1 dead using 7230  
the leader1 dead using 7230  
Number of cycles run: 9021  
  
  
the leader1 dead using 10987  
Number of cycles run: 11906  
  
  
the leader1 dead using 6784  
Number of cycles run: 8980  
  
  
the leader1 dead using 11456  
the leader1 dead using 11456  
Number of cycles run: 50000  
  
  
the leader1 dead using 7890  
Number of cycles run: 7890  
  
  
the leader1 dead using 2044  
Number of cycles run: 7383  
  
  
the leader1 dead using 608  
Number of cycles run: 8922  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 8475  
Number of cycles run: 8475  
  
  
Number of cycles run: 14570  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 6975  
Number of cycles run: 10933  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 6595  
the leader1 dead using 6595  
Number of cycles run: 24066  
  
  
the leader1 dead using 2089  
the leader1 dead using 2089  
the leader1 dead using 2089  
Number of cycles run: 10305  
  
  
the leader1 dead using 5428  
Number of cycles run: 8529  
  
  
the leader1 dead using 1109  
the leader1 dead using 1109  
Number of cycles run: 11846  
  
  
the leader1 dead using 5725  
the leader1 dead using 5725  
Number of cycles run: 11902  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 15256  
the leader1 dead using 15256  
Number of cycles run: 17883  
  
  
Number of cycles run: 13446  
  
  
the leader1 dead using 10435  
the leader1 dead using 10435  
the leader1 dead using 10435  
the leader1 dead using 10435  
Number of cycles run: 17409  
  
  
the leader1 dead using 7817  
Number of cycles run: 9080  
  
  
Number of cycles run: 16967  
  
  
the leader1 dead using 22905  
the leader1 dead using 22905  
Number of cycles run: 31008  
  
  
the leader1 dead using 24489  
the leader1 dead using 24489  
Number of cycles run: 50000  
  
  
the leader1 dead using 39744  
the leader1 dead using 39744  
Number of cycles run: 50000  
  
  
the leader1 dead using 4090  
the leader1 dead using 4090  
Number of cycles run: 9207  
  
  
the leader1 dead using 47257  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
Av cycles for leadership strength 0.5 is 26016  
standard diviation is 18331.670652224602  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 11629  
the leader1 dead using 11629  
Number of cycles run: 26424  
  
  
the leader1 dead using 6608  
Number of cycles run: 9454  
  
  
the leader1 dead using 14134  
the leader1 dead using 14134  
Number of cycles run: 18944  
  
  
the leader1 dead using 8259  
the leader1 dead using 8259  
Number of cycles run: 12453  
  
  
the leader1 dead using 8712  
Number of cycles run: 11867  
  
  
the leader1 dead using 2556  
the leader1 dead using 2556  
Number of cycles run: 50000  
  
  
the leader1 dead using 8945  
the leader1 dead using 8945  
the leader1 dead using 8945  
the leader1 dead using 8945  
the leader1 dead using 8945  
Number of cycles run: 38849  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 11113  
the leader1 dead using 11113  
the leader1 dead using 11113  
Number of cycles run: 13748  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 8974  
Number of cycles run: 9508  
  
  
the leader1 dead using 2322  
Number of cycles run: 8574  
  
  
the leader1 dead using 7407  
the leader1 dead using 7407  
Number of cycles run: 12552  
  
  
the leader1 dead using 4086  
the leader1 dead using 4086  
Number of cycles run: 11692  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4743  
the leader1 dead using 4743  
Number of cycles run: 21621  
  
  
the leader1 dead using 10104  
Number of cycles run: 23165  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5362  
Number of cycles run: 26140  
  
  
Number of cycles run: 23445  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 5258  
the leader1 dead using 5258  
Number of cycles run: 7123  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 31731  
Number of cycles run: 31731  
  
  
the leader1 dead using 8403  
Number of cycles run: 11730  
  
  
the leader1 dead using 6665  
Number of cycles run: 7878  
  
  
the leader1 dead using 21729  
Number of cycles run: 38770  
  
  
the leader1 dead using 6166  
Number of cycles run: 8486  
  
  
the leader1 dead using 5085

Number of cycles run: 21987  
  
  
the leader1 dead using 7207  
Number of cycles run: 9091  
  
  
the leader1 dead using 8189  
Number of cycles run: 8991  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 9136  
the leader1 dead using 9136  
Number of cycles run: 50000  
  
  
the leader1 dead using 15369  
Number of cycles run: 50000  
  
  
the leader1 dead using 1811  
the leader1 dead using 1811  
the leader1 dead using 1811  
the leader1 dead using 1811  
Number of cycles run: 26614  
  
  
the leader1 dead using 14537  
Number of cycles run: 24741  
  
  
the leader1 dead using 4328  
the leader1 dead using 4328  
Number of cycles run: 13296  
  
  
the leader1 dead using 10568  
Number of cycles run: 12231  
  
  
the leader1 dead using 7358  
Number of cycles run: 33421  
  
  
the leader1 dead using 4749  
the leader1 dead using 4749  
Number of cycles run: 8327  
  
  
Number of cycles run: 22851  
  
  
the leader1 dead using 14880  
the leader1 dead using 14880  
Number of cycles run: 50000  
  
  
the leader1 dead using 13488  
the leader1 dead using 13488  
the leader1 dead using 13488  
Number of cycles run: 24219  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 3566  
Number of cycles run: 50000  
  
  
the leader1 dead using 1465  
Number of cycles run: 11924  
  
  
the leader1 dead using 2159  
the leader1 dead using 2159  
Number of cycles run: 50000  
  
  
Number of cycles run: 20301  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 13912  
Number of cycles run: 15643  
  
  
Av cycles for leadership strength 0.5 is 27555  
standard diviation is 16653.63547328759  
Testing average cycles for leadership strength 0.5  
Number of cycles run: 9488  
  
  
Number of cycles run: 15669  
  
  
the leader1 dead using 6386  
Number of cycles run: 10220  
  
  
the leader1 dead using 9200  
Number of cycles run: 9200  
  
  
the leader1 dead using 6895  
Number of cycles run: 7832  
  
  
the leader1 dead using 2507  
Number of cycles run: 8112  
  
  
the leader1 dead using 2841  
the leader1 dead using 2841  
Number of cycles run: 7282  
  
  
the leader1 dead using 7541  
Number of cycles run: 50000  
  
  
the leader1 dead using 1835  
Number of cycles run: 50000  
  
  
the leader1 dead using 12282  
Number of cycles run: 19024  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2318  
the leader1 dead using 2318  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 823  
the leader1 dead using 823  
the leader1 dead using 823  
the leader1 dead using 823  
Number of cycles run: 10238  
  
  
the leader1 dead using 375  
the leader1 dead using 375  
Number of cycles run: 8968  
  
  
Number of cycles run: 7668  
  
  
the leader1 dead using 3790  
Number of cycles run: 13039  
  
  
Number of cycles run: 9721  
  
  
the leader1 dead using 2143  
the leader1 dead using 2143  
Number of cycles run: 8504  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4782  
Number of cycles run: 50000  
  
  
the leader1 dead using 5527  
the leader1 dead using 5527  
Number of cycles run: 9413  
  
  
the leader1 dead using 6583  
the leader1 dead using 6583  
Number of cycles run: 19571  
  
  
the leader1 dead using 1621  
Number of cycles run: 9154  
  
  
the leader1 dead using 1722  
Number of cycles run: 25703  
  
  
the leader1 dead using 6793  
the leader1 dead using 6793  
the leader1 dead using 6793  
Number of cycles run: 50000  
  
  
the leader1 dead using 3752  
the leader1 dead using 3752  
the leader1 dead using 3752  
Number of cycles run: 50000  
  
  
Number of cycles run: 22177  
  
  
the leader1 dead using 24153  
the leader1 dead using 24153  
Number of cycles run: 50000  
  
  
the leader1 dead using 1106  
the leader1 dead using 1106  
Number of cycles run: 9814  
  
  
the leader1 dead using 8398  
the leader1 dead using 8398  
the leader1 dead using 8398  
Number of cycles run: 10491  
  
  
the leader1 dead using 9152  
Number of cycles run: 11602  
  
  
the leader1 dead using 32721  
Number of cycles run: 50000  
  
  
the leader1 dead using 7515  
Number of cycles run: 9131  
  
  
the leader1 dead using 10014  
the leader1 dead using 10014  
Number of cycles run: 13603  
  
  
the leader1 dead using 7958  
Number of cycles run: 29524  
  
  
the leader1 dead using 5955  
the leader1 dead using 5955  
Number of cycles run: 7887  
  
  
Number of cycles run: 12077  
  
  
the leader1 dead using 1764  
the leader1 dead using 1764  
Number of cycles run: 50000  
  
  
the leader1 dead using 22300  
Number of cycles run: 50000  
  
  
the leader1 dead using 1335  
the leader1 dead using 1335  
the leader1 dead using 1335  
Number of cycles run: 7955  
  
  
the leader1 dead using 14387  
Number of cycles run: 50000  
  
  
the leader1 dead using 22165  
Number of cycles run: 29124  
  
  
the leader1 dead using 918  
the leader1 dead using 918  
Number of cycles run: 32879  
  
  
the leader1 dead using 5189  
the leader1 dead using 5189  
Number of cycles run: 7287  
  
  
the leader1 dead using 5508  
the leader1 dead using 5508  
Number of cycles run: 27240  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2263  
the leader1 dead using 2263  
Number of cycles run: 11437  
  
  
the leader1 dead using 6580  
Number of cycles run: 11463  
  
  
Av cycles for leadership strength 0.5 is 25249  
standard diviation is 18191.983029547573  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 1475  
the leader1 dead using 1475  
the leader1 dead using 1475  
Number of cycles run: 8275  
  
  
the leader1 dead using 1620  
Number of cycles run: 8800  
  
  
the leader1 dead using 11459  
Number of cycles run: 14535  
  
  
the leader1 dead using 1292  
the leader1 dead using 1292  
the leader1 dead using 1292  
the leader1 dead using 1292  
the leader1 dead using 1292  
Number of cycles run: 17869  
  
  
the leader1 dead using 14324  
the leader1 dead using 14324  
Number of cycles run: 15606  
  
  
Number of cycles run: 14075  
  
  
the leader1 dead using 1226  
the leader1 dead using 1226  
the leader1 dead using 1226  
Number of cycles run: 9129  
  
  
the leader1 dead using 2905  
the leader1 dead using 2905  
the leader1 dead using 2905  
Number of cycles run: 7781  
  
  
the leader1 dead using 6527  
Number of cycles run: 9099  
  
  
the leader1 dead using 3842  
the leader1 dead using 3842  
Number of cycles run: 11198  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4118  
Number of cycles run: 7302  
  
  
the leader1 dead using 7172  
Number of cycles run: 50000  
  
  
the leader1 dead using 3478  
Number of cycles run: 7850  
  
  
the leader1 dead using 4361  
Number of cycles run: 50000  
  
  
the leader1 dead using 38371  
Number of cycles run: 50000  
  
  
the leader1 dead using 5924  
Number of cycles run: 7268  
  
  
the leader1 dead using 6749  
the leader1 dead using 6749  
Number of cycles run: 13952  
  
  
the leader1 dead using 4161  
the leader1 dead using 4161  
Number of cycles run: 50000  
  
  
the leader1 dead using 6183  
the leader1 dead using 6183  
Number of cycles run: 9614  
  
  
the leader1 dead using 9547  
Number of cycles run: 28873  
  
  
the leader1 dead using 7978  
Number of cycles run: 50000  
  
  
the leader1 dead using 1762  
Number of cycles run: 8853  
  
  
the leader1 dead using 1113  
Number of cycles run: 50000  
  
  
the leader1 dead using 6182  
the leader1 dead using 6182  
Number of cycles run: 10882  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2983  
the leader1 dead using 2983  
the leader1 dead using 2983  
Number of cycles run: 16355  
  
  
Number of cycles run: 46623  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 4991  
Number of cycles run: 6977  
  
  
the leader1 dead using 5718  
the leader1 dead using 5718  
Number of cycles run: 8243  
  
  
the leader1 dead using 13134  
Number of cycles run: 14784  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 10804  
  
  
the leader1 dead using 6550  
Number of cycles run: 7893  
  
  
the leader1 dead using 2632  
the leader1 dead using 2632  
Number of cycles run: 10675  
  
  
Number of cycles run: 10652  
  
  
the leader1 dead using 7654  
the leader1 dead using 7654  
Number of cycles run: 12779  
  
  
the leader1 dead using 4705  
the leader1 dead using 4705  
Number of cycles run: 10774  
  
  
the leader1 dead using 8811  
Number of cycles run: 9515  
  
  
the leader1 dead using 1733  
Number of cycles run: 8306  
  
  
the leader1 dead using 8283  
Number of cycles run: 9576  
  
  
the leader1 dead using 3693  
Number of cycles run: 38270  
  
  
Number of cycles run: 7383  
  
  
the leader1 dead using 3373  
the leader1 dead using 3373  
the leader1 dead using 3373  
the leader1 dead using 3373  
Number of cycles run: 8298  
  
  
the leader1 dead using 4193

the leader1 dead using 4193  
the leader1 dead using 4193  
the leader1 dead using 4193  
Number of cycles run: 7474  
  
  
the leader1 dead using 2674  
the leader1 dead using 2674  
Number of cycles run: 50000  
  
  
the leader1 dead using 7498  
Number of cycles run: 12961  
  
  
the leader1 dead using 3643  
Number of cycles run: 50000  
  
  
the leader1 dead using 6527  
Number of cycles run: 9258  
  
  
Av cycles for leadership strength 0.5 is 21571  
standard diviation is 17670.786479026534  
Testing average cycles for leadership strength 0.5  
the leader1 dead using 7828  
Number of cycles run: 50000  
  
  
the leader1 dead using 2390  
the leader1 dead using 2390  
the leader1 dead using 2390  
Number of cycles run: 8177  
  
  
Number of cycles run: 13437  
  
  
the leader1 dead using 2559  
the leader1 dead using 2559  
Number of cycles run: 9588  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 2894  
the leader1 dead using 2894  
Number of cycles run: 15251  
  
  
the leader1 dead using 5085  
Number of cycles run: 27545  
  
  
the leader1 dead using 652  
the leader1 dead using 652  
Number of cycles run: 17010  
  
  
the leader1 dead using 5558  
the leader1 dead using 5558  
the leader1 dead using 5558  
Number of cycles run: 7064  
  
  
the leader1 dead using 2251  
Number of cycles run: 9048  
  
  
the leader1 dead using 14927  
the leader1 dead using 14927  
Number of cycles run: 34756  
  
  
Number of cycles run: 13462  
  
  
Number of cycles run: 50000  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 14396  
the leader1 dead using 14396  
the leader1 dead using 14396  
Number of cycles run: 17615  
  
  
the leader1 dead using 6715  
the leader1 dead using 6715  
Number of cycles run: 50000  
  
  
Number of cycles run: 6764  
  
  
the leader1 dead using 3775  
the leader1 dead using 3775  
Number of cycles run: 8185  
  
  
the leader1 dead using 5528  
Number of cycles run: 38572  
  
  
the leader1 dead using 7947  
Number of cycles run: 8514  
  
  
the leader1 dead using 7057  
Number of cycles run: 8392  
  
  
the leader1 dead using 3923  
Number of cycles run: 23390  
  
  
the leader1 dead using 1882  
the leader1 dead using 1882  
the leader1 dead using 1882  
Number of cycles run: 7818  
  
  
the leader1 dead using 27668  
the leader1 dead using 27668  
the leader1 dead using 27668  
Number of cycles run: 32636  
  
  
Number of cycles run: 16010  
  
  
the leader1 dead using 2755  
the leader1 dead using 2755  
Number of cycles run: 13067  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 6111  
Number of cycles run: 50000  
  
  
the leader1 dead using 3959  
the leader1 dead using 3959  
Number of cycles run: 33138  
  
  
the leader1 dead using 5895  
the leader1 dead using 5895  
Number of cycles run: 8707  
  
  
the leader1 dead using 3605  
the leader1 dead using 3605  
Number of cycles run: 11891  
  
  
the leader1 dead using 9177  
the leader1 dead using 9177  
the leader1 dead using 9177  
Number of cycles run: 12441  
  
  
the leader1 dead using 6385  
the leader1 dead using 6385  
the leader1 dead using 6385  
Number of cycles run: 11867  
  
  
the leader1 dead using 47148  
Number of cycles run: 50000  
  
  
the leader1 dead using 4515  
the leader1 dead using 4515  
the leader1 dead using 4515  
the leader1 dead using 4515  
the leader1 dead using 4515  
Number of cycles run: 22690  
  
  
Number of cycles run: 7882  
  
  
the leader1 dead using 964  
the leader1 dead using 964  
Number of cycles run: 16317  
  
  
the leader1 dead using 5392  
the leader1 dead using 5392  
Number of cycles run: 25455  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 6432  
the leader1 dead using 6432  
Number of cycles run: 8933  
  
  
the leader1 dead using 4730  
Number of cycles run: 50000  
  
  
the leader1 dead using 683  
the leader1 dead using 683  
the leader1 dead using 683  
Number of cycles run: 10826  
  
  
the leader1 dead using 4258  
the leader1 dead using 4258  
the leader1 dead using 4258  
Number of cycles run: 9339  
  
  
the leader1 dead using 8404  
Number of cycles run: 8404  
  
  
the leader1 dead using 3375  
Number of cycles run: 9917  
  
  
Number of cycles run: 11383  
  
  
Number of cycles run: 50000  
  
  
the leader1 dead using 513  
the leader1 dead using 513  
the leader1 dead using 513  
the leader1 dead using 513  
Number of cycles run: 50000  
  
  
the leader1 dead using 4625  
Number of cycles run: 13676  
  
  
the leader1 dead using 2540  
Number of cycles run: 8985  
  
  
Av cycles for leadership strength 0.5 is 23363  
standard diviation is 16876.599732439576