Python 3.6.3 |Anaconda, Inc.| (default, Oct 13 2017, 12:02:49)

[GCC 7.2.0] on linux

Type "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: /home/cserv1\_a/soc\_msc/ml16m6y/Downloads/schooling\_R2.py =====

Testing average cycles for repulsion strength 1

Number of cycles run: 2312

Number of cycles run: 719

Number of cycles run: 2349

Number of cycles run: 4005

Number of cycles run: 1650

Number of cycles run: 3830

Number of cycles run: 2146

Number of cycles run: 1052

Number of cycles run: 1579

Number of cycles run: 5609

Number of cycles run: 4657

Number of cycles run: 6105

Number of cycles run: 13864

Number of cycles run: 5678

Number of cycles run: 3007

Number of cycles run: 4068

Number of cycles run: 2686

Number of cycles run: 2800

Number of cycles run: 12867

Number of cycles run: 4870

Number of cycles run: 2064

Number of cycles run: 3959

Number of cycles run: 50000

Number of cycles run: 8105

Number of cycles run: 46329

Number of cycles run: 2535

Number of cycles run: 3337

Number of cycles run: 8123

Number of cycles run: 2543

Number of cycles run: 7756

Number of cycles run: 3950

Number of cycles run: 36344

Number of cycles run: 639

Number of cycles run: 1911

Number of cycles run: 458

Number of cycles run: 1007

Number of cycles run: 4236

Number of cycles run: 1487

Number of cycles run: 2257

Number of cycles run: 659

Number of cycles run: 2791

Number of cycles run: 1351

Number of cycles run: 3981

Number of cycles run: 2705

Number of cycles run: 16528

Number of cycles run: 11839

Number of cycles run: 10600

Number of cycles run: 2898

Number of cycles run: 3835

Number of cycles run: 8962

Number of cycles run: 3297

Number of cycles run: 2817

Number of cycles run: 744

Number of cycles run: 3912

Number of cycles run: 2114

Number of cycles run: 1942

Number of cycles run: 8497

Number of cycles run: 5657

Number of cycles run: 2697

Number of cycles run: 2433

Number of cycles run: 4098

Number of cycles run: 738

Number of cycles run: 5671

Number of cycles run: 4715

Number of cycles run: 3711

Number of cycles run: 694

Number of cycles run: 6119

Number of cycles run: 3075

Number of cycles run: 3960

Number of cycles run: 6767

Number of cycles run: 2642

Number of cycles run: 1335

Number of cycles run: 4529

Number of cycles run: 6674

Number of cycles run: 4901

Number of cycles run: 8033

Number of cycles run: 2315

Number of cycles run: 743

Number of cycles run: 3137

Number of cycles run: 2983

Number of cycles run: 7190

Number of cycles run: 2743

Number of cycles run: 8745

Number of cycles run: 2808

Number of cycles run: 1704

Number of cycles run: 4037

Number of cycles run: 13730

Number of cycles run: 972

Number of cycles run: 2995

Number of cycles run: 50000

Number of cycles run: 8942

Number of cycles run: 5709

Number of cycles run: 4239

Number of cycles run: 3181

Number of cycles run: 2821

Number of cycles run: 7978

Number of cycles run: 3768

Number of cycles run: 14742

Number of cycles run: 2234

Number of cycles run: 3881

Av cycles for repulsion strength 1 is 6024

standard diviation is 8846.07017456

Testing average cycles for repulsion strength 1

Number of cycles run: 2406

Number of cycles run: 3366

Number of cycles run: 7460

Number of cycles run: 2663

Number of cycles run: 3058

Number of cycles run: 3147

Number of cycles run: 6013

Number of cycles run: 50000

Number of cycles run: 13614

Number of cycles run: 2378

Number of cycles run: 6025

Number of cycles run: 1372

Number of cycles run: 21955

Number of cycles run: 2448

Number of cycles run: 909

Number of cycles run: 11316

Number of cycles run: 6247

Number of cycles run: 1714

Number of cycles run: 3973

Number of cycles run: 6133

Number of cycles run: 2594

Number of cycles run: 4688

Number of cycles run: 597

Number of cycles run: 5783

Number of cycles run: 3492

Number of cycles run: 3170

Number of cycles run: 3441

Number of cycles run: 2493

Number of cycles run: 3301

Number of cycles run: 1616

Number of cycles run: 686

Number of cycles run: 1727

Number of cycles run: 32788

Number of cycles run: 3153

Number of cycles run: 2281

Number of cycles run: 1008

Number of cycles run: 2299

Number of cycles run: 2128

Number of cycles run: 3205

Number of cycles run: 50000

Number of cycles run: 6993

Number of cycles run: 23161

Number of cycles run: 3046

Number of cycles run: 3775

Number of cycles run: 1396

Number of cycles run: 11080

Number of cycles run: 938

Number of cycles run: 1478

Number of cycles run: 2442

Number of cycles run: 3123

Number of cycles run: 2335

Number of cycles run: 11497

Number of cycles run: 6928

Number of cycles run: 7096

Number of cycles run: 3175

Number of cycles run: 922

Number of cycles run: 3088

Number of cycles run: 2271

Number of cycles run: 11649

Number of cycles run: 2345

Number of cycles run: 2924

Number of cycles run: 31905

Number of cycles run: 4329

Number of cycles run: 50000

Number of cycles run: 37542

Number of cycles run: 5343

Number of cycles run: 4610

Number of cycles run: 1660

Number of cycles run: 9184

Number of cycles run: 5127

Number of cycles run: 29877

Number of cycles run: 1627

Number of cycles run: 50000

Number of cycles run: 2949

Number of cycles run: 468

Number of cycles run: 25039

Number of cycles run: 1327

Number of cycles run: 5447

Number of cycles run: 1715

Number of cycles run: 1163

Number of cycles run: 1206

Number of cycles run: 465

Number of cycles run: 50000

Number of cycles run: 50000

Number of cycles run: 21162

Number of cycles run: 7060

Number of cycles run: 3334

Number of cycles run: 842

Number of cycles run: 1702

Number of cycles run: 8476

Number of cycles run: 8448

Number of cycles run: 36770

Number of cycles run: 11235

Number of cycles run: 4560

Number of cycles run: 45715

Number of cycles run: 2770

Number of cycles run: 1765

Number of cycles run: 1533

Number of cycles run: 2959

Number of cycles run: 2750

Av cycles for repulsion strength 1 is 9303

standard diviation is 13583.7560684

Testing average cycles for repulsion strength 1

Number of cycles run: 10998

Number of cycles run: 1226

Number of cycles run: 2946

Number of cycles run: 9869

Number of cycles run: 1296

Number of cycles run: 1240

Number of cycles run: 451

Number of cycles run: 2443

Number of cycles run: 3058

Number of cycles run: 1331

Number of cycles run: 10215

Number of cycles run: 1651

Number of cycles run: 36102

Number of cycles run: 437

Number of cycles run: 1197

Number of cycles run: 2794

Number of cycles run: 2471

Number of cycles run: 2985

Number of cycles run: 4695

Number of cycles run: 7220

Number of cycles run: 899

Number of cycles run: 4001

Number of cycles run: 4039

Number of cycles run: 2454

Number of cycles run: 50000

Number of cycles run: 1143

Number of cycles run: 9066

Number of cycles run: 1918

Number of cycles run: 3100

Number of cycles run: 2621

Number of cycles run: 4398

Number of cycles run: 50000

Number of cycles run: 4079

Number of cycles run: 11897

Number of cycles run: 2246

Number of cycles run: 11957

Number of cycles run: 3118

Number of cycles run: 3311

Number of cycles run: 9349

Number of cycles run: 619

Number of cycles run: 3322

Number of cycles run: 4998

Number of cycles run: 6448

Number of cycles run: 5054

Number of cycles run: 7088

Number of cycles run: 1606

Number of cycles run: 2451

Number of cycles run: 24714

Number of cycles run: 1556

Number of cycles run: 654

Number of cycles run: 3454

Number of cycles run: 5315

Number of cycles run: 6988

Number of cycles run: 1504

Number of cycles run: 17879

Number of cycles run: 5969

Number of cycles run: 3518

Number of cycles run: 5365

Number of cycles run: 5955

Number of cycles run: 5192

Number of cycles run: 7849

Number of cycles run: 5353

Number of cycles run: 15307

Number of cycles run: 1348

Number of cycles run: 1414

Number of cycles run: 3405

Number of cycles run: 3066

Number of cycles run: 6289

Number of cycles run: 5134

Number of cycles run: 5456

Number of cycles run: 9452

Number of cycles run: 469

Number of cycles run: 5638

Number of cycles run: 1876

Number of cycles run: 36081

Number of cycles run: 4415

Number of cycles run: 50000

Number of cycles run: 25873

Number of cycles run: 3471

Number of cycles run: 6610

Number of cycles run: 48137

Number of cycles run: 3657

Number of cycles run: 9510

Number of cycles run: 3365

Number of cycles run: 2432

Number of cycles run: 999

Number of cycles run: 2100

Number of cycles run: 2942

Number of cycles run: 5305

Number of cycles run: 1108

Number of cycles run: 1672

Number of cycles run: 2687

Number of cycles run: 2233

Number of cycles run: 2188

Number of cycles run: 1189

Number of cycles run: 1892

Number of cycles run: 479

Number of cycles run: 7073

Number of cycles run: 1588

Number of cycles run: 7669

Av cycles for repulsion strength 1 is 7106

standard diviation is 10705.2021457

Testing average cycles for repulsion strength 1

Number of cycles run: 2801

Number of cycles run: 5135

Number of cycles run: 14857

Number of cycles run: 2147

Number of cycles run: 2998

Number of cycles run: 2115

Number of cycles run: 8443

Number of cycles run: 1547

Number of cycles run: 589

Number of cycles run: 10372

Number of cycles run: 5640

Number of cycles run: 2412

Number of cycles run: 1961

Number of cycles run: 2458

Number of cycles run: 416

Number of cycles run: 8877

Number of cycles run: 1205

Number of cycles run: 4475

Number of cycles run: 2286

Number of cycles run: 15036

Number of cycles run: 3544

Number of cycles run: 930

Number of cycles run: 9962

Number of cycles run: 460

Number of cycles run: 1432

Number of cycles run: 858

Number of cycles run: 5788

Number of cycles run: 6785

Number of cycles run: 5713

Number of cycles run: 3703

Number of cycles run: 4396

Number of cycles run: 2060

Number of cycles run: 5622

Number of cycles run: 3116

Number of cycles run: 1102

Number of cycles run: 8074

Number of cycles run: 1015

Number of cycles run: 1744

Number of cycles run: 5946

Number of cycles run: 4657

Number of cycles run: 998

Number of cycles run: 1638

Number of cycles run: 5427

Number of cycles run: 50000

Number of cycles run: 8858

Number of cycles run: 1717

Number of cycles run: 4615

Number of cycles run: 6882

Number of cycles run: 1917

Number of cycles run: 3035

Number of cycles run: 2936

Number of cycles run: 3631

Number of cycles run: 14036

Number of cycles run: 1647

Number of cycles run: 2106

Number of cycles run: 5269

Number of cycles run: 9435

Number of cycles run: 12242

Number of cycles run: 10375

Number of cycles run: 922

Number of cycles run: 4922

Number of cycles run: 1256

Number of cycles run: 2236

Number of cycles run: 5837

Number of cycles run: 933

Number of cycles run: 1667

Number of cycles run: 2319

Number of cycles run: 885

Number of cycles run: 7159

Number of cycles run: 2867

Number of cycles run: 3377

Number of cycles run: 3805

Number of cycles run: 3368

Number of cycles run: 641

Number of cycles run: 1419

Number of cycles run: 3614

Number of cycles run: 3959

Number of cycles run: 4706

Number of cycles run: 9165

Number of cycles run: 1002

Number of cycles run: 4212

Number of cycles run: 7019

Number of cycles run: 6940

Number of cycles run: 853

Number of cycles run: 6955

Number of cycles run: 3573

Number of cycles run: 3161

Number of cycles run: 50000

Number of cycles run: 2134

Number of cycles run: 621

Number of cycles run: 1344

Number of cycles run: 4636

Number of cycles run: 6385

Number of cycles run: 2633

Number of cycles run: 642

Number of cycles run: 6647

Number of cycles run: 5140

Number of cycles run: 7673

Number of cycles run: 5789

Number of cycles run: 1932

Av cycles for repulsion strength 1 is 5137

standard diviation is 7223.02418112

Testing average cycles for repulsion strength 1

Number of cycles run: 4109

Number of cycles run: 50000

Number of cycles run: 3253

Number of cycles run: 1509

Number of cycles run: 9447

Number of cycles run: 50000

Number of cycles run: 4006

Number of cycles run: 2879

Number of cycles run: 50000

Number of cycles run: 2362

Number of cycles run: 6025

Number of cycles run: 3284

Number of cycles run: 3515

Number of cycles run: 704

Number of cycles run: 5667

Number of cycles run: 2386

Number of cycles run: 6521

Number of cycles run: 6932

Number of cycles run: 4257

Number of cycles run: 50000

Number of cycles run: 7985

Number of cycles run: 7122

Number of cycles run: 8809

Number of cycles run: 5673

Number of cycles run: 6832

Number of cycles run: 998

Number of cycles run: 4357

Number of cycles run: 4447

Number of cycles run: 4044

Number of cycles run: 2924

Number of cycles run: 4245

Number of cycles run: 3075

Number of cycles run: 1765

Number of cycles run: 887

Number of cycles run: 6820

Number of cycles run: 27993

Number of cycles run: 9940

Number of cycles run: 4702

Number of cycles run: 3192

Number of cycles run: 12285

Number of cycles run: 7577

Number of cycles run: 1741

Number of cycles run: 513

Number of cycles run: 3672

Number of cycles run: 1860

Number of cycles run: 1716

Number of cycles run: 5340

Number of cycles run: 3363

Number of cycles run: 1367

Number of cycles run: 751

Number of cycles run: 50000

Number of cycles run: 3055

Number of cycles run: 7174

Number of cycles run: 1260

Number of cycles run: 5921

Number of cycles run: 29004

Number of cycles run: 1000

Number of cycles run: 1536

Number of cycles run: 1840

Number of cycles run: 8169

Number of cycles run: 5949

Number of cycles run: 29350

Number of cycles run: 23594

Number of cycles run: 2344

Number of cycles run: 3881

Number of cycles run: 5172

Number of cycles run: 15088

Number of cycles run: 5324

Number of cycles run: 1241

Number of cycles run: 2505

Number of cycles run: 49486

Number of cycles run: 3813

Number of cycles run: 903

Number of cycles run: 10818

Number of cycles run: 2515

Number of cycles run: 2042

Number of cycles run: 1356

Number of cycles run: 4053

Number of cycles run: 9213

Number of cycles run: 1126

Number of cycles run: 1273

Number of cycles run: 6130

Number of cycles run: 569

Number of cycles run: 50000

Number of cycles run: 5336

Number of cycles run: 19125

Number of cycles run: 7139

Number of cycles run: 6619

Number of cycles run: 499

Number of cycles run: 867

Number of cycles run: 4178

Number of cycles run: 1294

Number of cycles run: 4913

Number of cycles run: 4368

Number of cycles run: 2261

Number of cycles run: 3093

Number of cycles run: 1192

Number of cycles run: 1539

Number of cycles run: 1449

Number of cycles run: 465

Av cycles for repulsion strength 1 is 8338

standard diviation is 12748.1990169

Testing average cycles for repulsion strength 1

Number of cycles run: 11818

Number of cycles run: 1333

Number of cycles run: 2552

Number of cycles run: 2830

Number of cycles run: 4160

Number of cycles run: 4324

Number of cycles run: 1134

Number of cycles run: 1467

Number of cycles run: 2697

Python 3.6.3 |Anaconda, Inc.| (default, Oct 13 2017, 12:02:49)

[GCC 7.2.0] on linux

Type "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: /home/cserv1\_a/soc\_msc/ml16m6y/Downloads/schooling\_R3.py =====6534.45

Testing average cycles for repulsion strength 1

Number of cycles run: 3071

Number of cycles run: 2816

Number of cycles run: 8207

Number of cycles run: 1686

Number of cycles run: 1498

Number of cycles run: 4810

Number of cycles run: 3083

Number of cycles run: 6816

Number of cycles run: 6582

Number of cycles run: 3159

Number of cycles run: 612

Number of cycles run: 801

Number of cycles run: 1136

Number of cycles run: 3586

Number of cycles run: 1272

Number of cycles run: 5072

Number of cycles run: 1419

Number of cycles run: 1510

Number of cycles run: 613

Number of cycles run: 706

Number of cycles run: 2603

Number of cycles run: 5928

Number of cycles run: 2534

Number of cycles run: 2999

Number of cycles run: 12566

Number of cycles run: 50000

Number of cycles run: 1387

Number of cycles run: 4605

Number of cycles run: 7060

Number of cycles run: 4905

Number of cycles run: 488

Number of cycles run: 1239

Number of cycles run: 6977

Number of cycles run: 474

Number of cycles run: 6328

Number of cycles run: 3530

Number of cycles run: 4103

Number of cycles run: 6005

Number of cycles run: 7258

Number of cycles run: 449

Number of cycles run: 3076

Number of cycles run: 1735

Number of cycles run: 5859

Number of cycles run: 30756

Number of cycles run: 2618

Number of cycles run: 5964

Number of cycles run: 1793

Number of cycles run: 2448

Number of cycles run: 1352

Number of cycles run: 3365

Number of cycles run: 2358

Number of cycles run: 16584

Number of cycles run: 904

Number of cycles run: 4909

Number of cycles run: 4756

Number of cycles run: 4803

Number of cycles run: 3205

Number of cycles run: 530

Number of cycles run: 731

Number of cycles run: 50000

Number of cycles run: 6669

Number of cycles run: 5643

Number of cycles run: 3596

Number of cycles run: 2869

Number of cycles run: 4926

Number of cycles run: 4755

Number of cycles run: 12799

Number of cycles run: 4842

Number of cycles run: 2769

Number of cycles run: 1237

Number of cycles run: 4112

Number of cycles run: 1335

Number of cycles run: 50000

Number of cycles run: 5456

Number of cycles run: 4894

Number of cycles run: 1901

Number of cycles run: 4366

Number of cycles run: 1195

Number of cycles run: 2229

Number of cycles run: 11888

Number of cycles run: 949

Number of cycles run: 4215

Number of cycles run: 882

Number of cycles run: 1335

Number of cycles run: 7677

Number of cycles run: 2316

Number of cycles run: 677

Number of cycles run: 3822

Number of cycles run: 2776

Number of cycles run: 3089

Number of cycles run: 3432

Number of cycles run: 13542

Number of cycles run: 4637

Number of cycles run: 468

Number of cycles run: 5080

Number of cycles run: 895

Number of cycles run: 2710

Number of cycles run: 2034

Number of cycles run: 2359

Number of cycles run: 561

Av cycles for repulsion strength 1 is 5385

standard diviation is 8860.63394695

Testing average cycles for repulsion strength 1

Number of cycles run: 658

Number of cycles run: 3489

Number of cycles run: 2449

Number of cycles run: 4207

Number of cycles run: 3075

Number of cycles run: 4138

Number of cycles run: 3092

Number of cycles run: 2174

Number of cycles run: 4987

Number of cycles run: 1028

Number of cycles run: 5136

Number of cycles run: 11397

Number of cycles run: 50000

Number of cycles run: 983

Number of cycles run: 2969

Number of cycles run: 463

Number of cycles run: 455

Number of cycles run: 3720

Number of cycles run: 2385

Number of cycles run: 7206

Number of cycles run: 2749

Number of cycles run: 729

Number of cycles run: 1017

Number of cycles run: 22253

Number of cycles run: 3175

Number of cycles run: 3347

Number of cycles run: 469

Number of cycles run: 38814

Number of cycles run: 2712

Number of cycles run: 20331

Number of cycles run: 4260

Number of cycles run: 4092

Number of cycles run: 50000

Number of cycles run: 4244

Number of cycles run: 3451

Number of cycles run: 3442

Number of cycles run: 10176

Number of cycles run: 3666

Number of cycles run: 4049

Number of cycles run: 4317

Number of cycles run: 3777

Number of cycles run: 7956

Number of cycles run: 955

Number of cycles run: 5482

Number of cycles run: 3436

Number of cycles run: 3407

Number of cycles run: 4408

Number of cycles run: 8336

Number of cycles run: 447

Number of cycles run: 4593

Number of cycles run: 2909

Number of cycles run: 6947

Number of cycles run: 1490

Number of cycles run: 2559

Number of cycles run: 2057

Number of cycles run: 7293

Number of cycles run: 5210

Number of cycles run: 815

Number of cycles run: 1115

Number of cycles run: 2287

Number of cycles run: 4226

Number of cycles run: 1301

Number of cycles run: 1484

Number of cycles run: 2818

Number of cycles run: 1634

Number of cycles run: 6945

Number of cycles run: 12149

Number of cycles run: 783

Number of cycles run: 626

Number of cycles run: 474

Number of cycles run: 25296

Number of cycles run: 1597

Number of cycles run: 3369

Number of cycles run: 5156

Number of cycles run: 3280

Number of cycles run: 4301

Number of cycles run: 1134

Number of cycles run: 1928

Number of cycles run: 2353

Number of cycles run: 50000

Number of cycles run: 2384

Number of cycles run: 631

Number of cycles run: 6326

Number of cycles run: 8098

Number of cycles run: 12991

Number of cycles run: 5595

Number of cycles run: 1306

Number of cycles run: 530

Number of cycles run: 896

Number of cycles run: 2478

Number of cycles run: 599

Number of cycles run: 18451

Number of cycles run: 1869

Number of cycles run: 1331

Number of cycles run: 4483

Number of cycles run: 472

Number of cycles run: 2288

Number of cycles run: 1407

Number of cycles run: 4364

Number of cycles run: 5712

Av cycles for repulsion strength 1 is 5898

standard diviation is 9607.67768793

Testing average cycles for repulsion strength 1

Number of cycles run: 463

Number of cycles run: 3438

Number of cycles run: 4336

Number of cycles run: 4811

Number of cycles run: 50000

Number of cycles run: 1356

Number of cycles run: 1261

Number of cycles run: 3096

Number of cycles run: 3240

Number of cycles run: 843

Number of cycles run: 1817

Number of cycles run: 4634

Number of cycles run: 50000

Number of cycles run: 1335

Number of cycles run: 11501

Number of cycles run: 4257

Number of cycles run: 7386

Number of cycles run: 738

Number of cycles run: 2456

Number of cycles run: 2396

Number of cycles run: 3607

Number of cycles run: 1636

Number of cycles run: 2932

Number of cycles run: 3736

Number of cycles run: 50000

Number of cycles run: 2590

Number of cycles run: 6870

Number of cycles run: 50000

Number of cycles run: 9563

Number of cycles run: 10021

Number of cycles run: 2612

Number of cycles run: 10435

Number of cycles run: 1783

Number of cycles run: 2942

Number of cycles run: 3094

Number of cycles run: 2081

Number of cycles run: 28317

Number of cycles run: 6227

Number of cycles run: 5912

Number of cycles run: 15849

Number of cycles run: 2683

Number of cycles run: 5442

Number of cycles run: 2864

Number of cycles run: 4320

Number of cycles run: 961

Number of cycles run: 597

Number of cycles run: 9732

Number of cycles run: 4360

Number of cycles run: 800

Number of cycles run: 50000

Number of cycles run: 1131

Number of cycles run: 1347

Number of cycles run: 2254

Number of cycles run: 5254

Number of cycles run: 4470

Number of cycles run: 5427

Number of cycles run: 3558

Number of cycles run: 1831

Number of cycles run: 1934

Number of cycles run: 3892

Number of cycles run: 1927

Number of cycles run: 1717

Number of cycles run: 470

Number of cycles run: 3303

Number of cycles run: 2688

Number of cycles run: 50000

Number of cycles run: 1354

Number of cycles run: 3718

Number of cycles run: 3221

Number of cycles run: 3590

Number of cycles run: 5486

Number of cycles run: 2994

Number of cycles run: 7523

Number of cycles run: 4046

Number of cycles run: 6190

Number of cycles run: 6412

Number of cycles run: 740

Number of cycles run: 24087

Number of cycles run: 5227

Number of cycles run: 1335

Number of cycles run: 1558

Number of cycles run: 1904

Number of cycles run: 50000

Number of cycles run: 3014

Number of cycles run: 3855

Number of cycles run: 1754

Number of cycles run: 13823

Number of cycles run: 4006

Number of cycles run: 2768

Number of cycles run: 3881

Number of cycles run: 1141

Number of cycles run: 6034

Number of cycles run: 572

Number of cycles run: 3516

Number of cycles run: 5474

Number of cycles run: 3709

Number of cycles run: 2395

Number of cycles run: 3007

Number of cycles run: 1721

Number of cycles run: 4987

Av cycles for repulsion strength 1 is 7475

standard diviation is 12451.8846388

Testing average cycles for repulsion strength 1

Number of cycles run: 1515

Number of cycles run: 10258

Number of cycles run: 4835

Number of cycles run: 428

Number of cycles run: 2772

Number of cycles run: 5401

Number of cycles run: 3471

Number of cycles run: 2042

Number of cycles run: 807

Number of cycles run: 1819

Number of cycles run: 2668

Number of cycles run: 4361

Number of cycles run: 2095

Number of cycles run: 2736

Number of cycles run: 5187

Number of cycles run: 4094

Number of cycles run: 3401

Number of cycles run: 448

Number of cycles run: 5375

Number of cycles run: 2708

Number of cycles run: 2547

Number of cycles run: 11961

Number of cycles run: 1451

Number of cycles run: 12846

Number of cycles run: 2334

Number of cycles run: 12465

Number of cycles run: 4402

Number of cycles run: 2102

Number of cycles run: 4353

Number of cycles run: 13081

Number of cycles run: 3115

Number of cycles run: 1268

Number of cycles run: 2952

Number of cycles run: 2120

Number of cycles run: 42920

Number of cycles run: 3070

Number of cycles run: 5857

Number of cycles run: 2299

Number of cycles run: 1574

Number of cycles run: 10994

Number of cycles run: 2235

Number of cycles run: 4708

Number of cycles run: 1900

Number of cycles run: 2183

Number of cycles run: 2703

Number of cycles run: 3691

Number of cycles run: 2834

Number of cycles run: 16773

Number of cycles run: 11349

Number of cycles run: 3422

Number of cycles run: 2884

Number of cycles run: 2595

Number of cycles run: 827

Number of cycles run: 5916

Number of cycles run: 3407

Number of cycles run: 6923

Number of cycles run: 3190

Number of cycles run: 2238

Number of cycles run: 2695

Number of cycles run: 2674

Number of cycles run: 1314

Number of cycles run: 2857

Number of cycles run: 50000

Number of cycles run: 4316

Number of cycles run: 3271

Number of cycles run: 50000

Number of cycles run: 2970

Number of cycles run: 1062

Number of cycles run: 2928

Number of cycles run: 4344

Number of cycles run: 1413

Number of cycles run: 2520

Number of cycles run: 3291

Number of cycles run: 50000

Number of cycles run: 3450

Number of cycles run: 8438

Number of cycles run: 14530

Number of cycles run: 1469

Number of cycles run: 2604

Number of cycles run: 1123

Number of cycles run: 1788

Number of cycles run: 721

Number of cycles run: 662

Number of cycles run: 3568

Number of cycles run: 7846

Number of cycles run: 6282

Number of cycles run: 3513

Number of cycles run: 834

Number of cycles run: 1855

Number of cycles run: 457

Number of cycles run: 4908

Number of cycles run: 3623

Number of cycles run: 5760

Number of cycles run: 1384

Number of cycles run: 5078

Number of cycles run: 26493

Number of cycles run: 1990

Number of cycles run: 4258

Number of cycles run: 35855

Number of cycles run: 3661

Av cycles for repulsion strength 1 is 6277

standard diviation is 9994.92198784

Testing average cycles for repulsion strength 1

Number of cycles run: 659

Number of cycles run: 4186

Number of cycles run: 4894

Number of cycles run: 2216

Number of cycles run: 2241

Number of cycles run: 3225

Number of cycles run: 2867

Number of cycles run: 2796

Number of cycles run: 3660

Number of cycles run: 2658

Number of cycles run: 2481

Number of cycles run: 1327

Number of cycles run: 1978

Number of cycles run: 15934

Number of cycles run: 6651

Number of cycles run: 13020

Number of cycles run: 50000

Number of cycles run: 4811

Number of cycles run: 5268

Number of cycles run: 11924

Number of cycles run: 4055

Number of cycles run: 50000

Number of cycles run: 8478

Number of cycles run: 4104

Number of cycles run: 4538

Number of cycles run: 5531

Number of cycles run: 887

Number of cycles run: 5987

Number of cycles run: 5333

Number of cycles run: 463

Number of cycles run: 6144

Number of cycles run: 6930

Number of cycles run: 3069

Number of cycles run: 3962

Number of cycles run: 2806

Number of cycles run: 635

Number of cycles run: 465

Number of cycles run: 9738

Number of cycles run: 7093

Number of cycles run: 2801

Number of cycles run: 2135

Number of cycles run: 5568

Number of cycles run: 862

Number of cycles run: 15370

Number of cycles run: 5085

Number of cycles run: 1583

Number of cycles run: 1787

Number of cycles run: 22104

Number of cycles run: 14747

Number of cycles run: 5049

Number of cycles run: 3091

Number of cycles run: 2618

Number of cycles run: 8863

Number of cycles run: 3912

Number of cycles run: 2020

Number of cycles run: 1914

Number of cycles run: 4031

Number of cycles run: 6018

Number of cycles run: 2978

Number of cycles run: 4732

Number of cycles run: 3316

Number of cycles run: 924

Number of cycles run: 3058

Number of cycles run: 1581

Number of cycles run: 6074

Number of cycles run: 4186

Number of cycles run: 2206

Number of cycles run: 416

Number of cycles run: 4325

Number of cycles run: 1581

Number of cycles run: 5670

Number of cycles run: 779

Number of cycles run: 50000

Number of cycles run: 8096

Number of cycles run: 2451

Number of cycles run: 2760

Number of cycles run: 1821

Number of cycles run: 3039

Number of cycles run: 4521

Number of cycles run: 772

Number of cycles run: 9833

Number of cycles run: 1987

Number of cycles run: 3874

Number of cycles run: 3643

Number of cycles run: 1448

Number of cycles run: 2724

Number of cycles run: 2651

Number of cycles run: 1589

Number of cycles run: 2683

Number of cycles run: 2988

Number of cycles run: 452

Number of cycles run: 3511

Number of cycles run: 869

Number of cycles run: 2910

Number of cycles run: 9756

Number of cycles run: 1739

Number of cycles run: 3101

Number of cycles run: 3120

Number of cycles run: 4960

Number of cycles run: 1042

Av cycles for repulsion strength 1 is 5627

standard diviation is 8654.37587895

Testing average cycles for repulsion strength 1

Number of cycles run: 2890

Number of cycles run: 2154

Number of cycles run: 2089

Number of cycles run: 5464

Number of cycles run: 2753

Number of cycles run: 2957

Number of cycles run: 2094

Number of cycles run: 2752

Number of cycles run: 5552

Number of cycles run: 457

Number of cycles run: 3593

Number of cycles run: 2265

Number of cycles run: 4713

Number of cycles run: 7987

Number of cycles run: 4054

Number of cycles run: 17153

Number of cycles run: 15214

Number of cycles run: 9615

Number of cycles run: 2823

Number of cycles run: 5698

Number of cycles run: 5848

Number of cycles run: 3247

Number of cycles run: 5110

Number of cycles run: 3514

Number of cycles run: 2418

Number of cycles run: 2330

Number of cycles run: 17639

Number of cycles run: 6273

Number of cycles run: 958

Number of cycles run: 3753

Number of cycles run: 463

Number of cycles run: 6072

Number of cycles run: 8434

Number of cycles run: 26818

Number of cycles run: 3852

Number of cycles run: 6874

Number of cycles run: 13825

Number of cycles run: 610

Number of cycles run: 17458

Number of cycles run: 1538

Number of cycles run: 6893

Number of cycles run: 3299

Number of cycles run: 1664

Number of cycles run: 4194

Number of cycles run: 23193

Number of cycles run: 4005

Number of cycles run: 1873

Number of cycles run: 4126

Number of cycles run: 2563

Number of cycles run: 470

Number of cycles run: 1879

Number of cycles run: 5472

Number of cycles run: 4962

Number of cycles run: 468

Number of cycles run: 5718

Number of cycles run: 431

Number of cycles run: 1577

Number of cycles run: 1907

Number of cycles run: 15486

Number of cycles run: 3127

Number of cycles run: 2893

Number of cycles run: 3079

Number of cycles run: 3895

Number of cycles run: 955

Number of cycles run: 1107

Number of cycles run: 13562

Number of cycles run: 5495

Number of cycles run: 4071

Number of cycles run: 3098

Number of cycles run: 3361

Number of cycles run: 2305

Number of cycles run: 2383

Number of cycles run: 2462

Number of cycles run: 2969

Number of cycles run: 615

Number of cycles run: 10881

Number of cycles run: 8449

Number of cycles run: 2568

Number of cycles run: 4424

Number of cycles run: 4609

Number of cycles run: 1925

Number of cycles run: 2012

Number of cycles run: 1577

Number of cycles run: 7150

Number of cycles run: 11186

Number of cycles run: 4139

Number of cycles run: 1233

Number of cycles run: 4567

Number of cycles run: 3750

Number of cycles run: 3303

Number of cycles run: 2896

Number of cycles run: 7835

Number of cycles run: 3582

Number of cycles run: 4456

Number of cycles run: 1751

Number of cycles run: 1034

Number of cycles run: 4965

Number of cycles run: 3556

Number of cycles run: 745

Number of cycles run: 43491

Av cycles for repulsion strength 1 is 5309

standard diviation is 6161.6472307