

Analysis of the Data from Myelopoiesis

```
clearvars  
addpath(genpath('..'))
```

Pre-processing the data

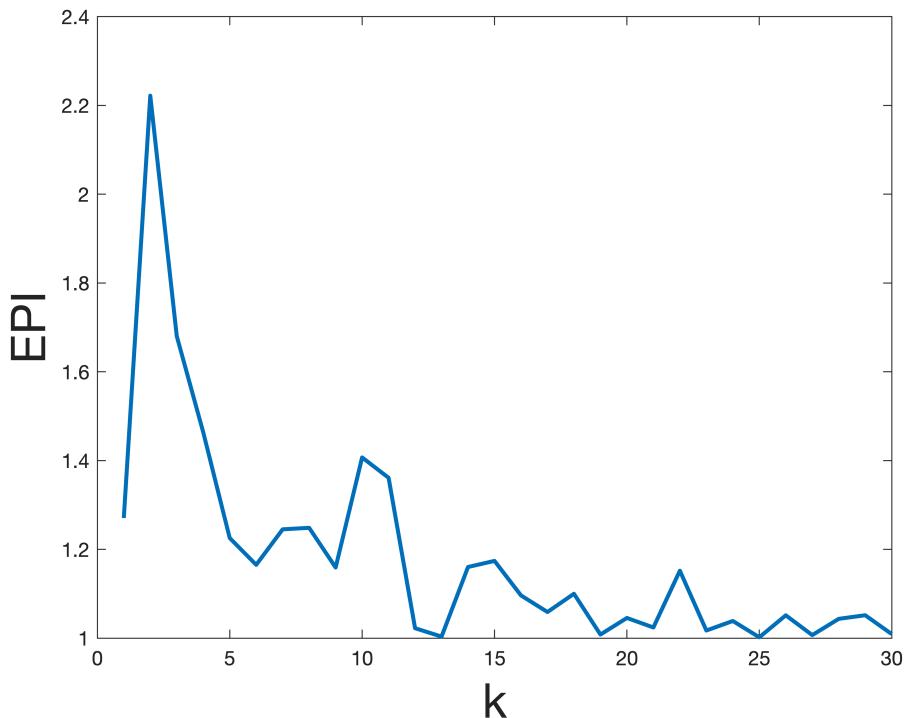
```
load olsson_new.mat  
data = data_olsson_clean;  
data = log(data+1);  
data = (data-mean(data))./std(data);  
true_labs = labs_cluster_clean;  
[N_cell,~] = size(data);
```

Estimation of Number of Clusters from EPI

```
par.choice_distance = 'cosine';  
out = EstClusterNum(data,par);
```

```
Mean value of sigma: 0.35425  
Minimum value of sigma: 0.23401  
Maximum value of sigma: 0.47158
```

```
plot(out.ratio(1:30), 'LineWidth', 2.0)  
xlabel('k', 'FontSize', 24);  
ylabel('EPI', 'FontSize', 24);
```



Initial visualization by tSNE

```

rng(1)
choice_distance = 'cosine';
Dist = squareform(pdist (data,choice_distance));
ydata = tsne_d(Dist);

```

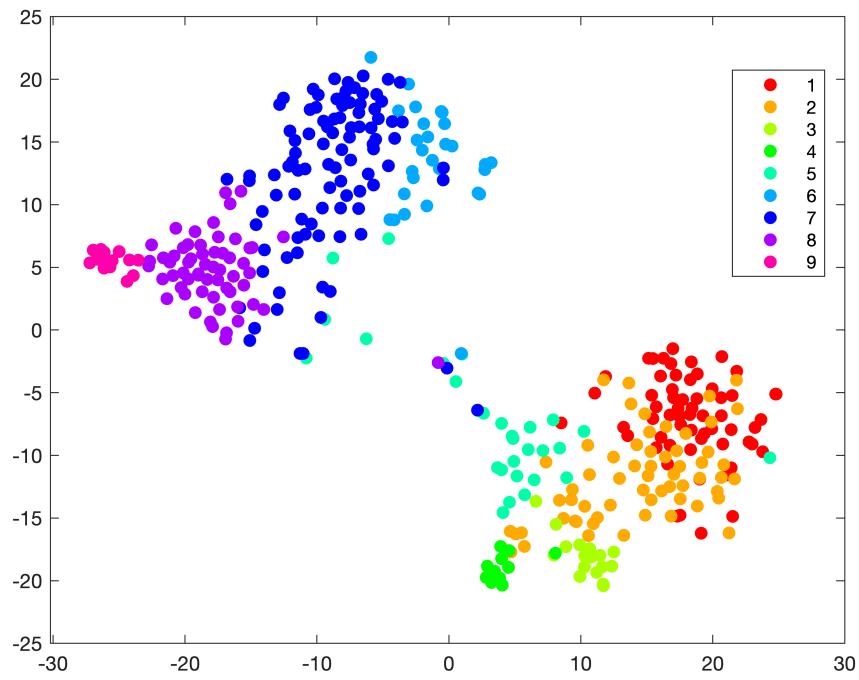
```

Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8168
Iteration 20: error is 36.9587
Iteration 30: error is 36.704
Iteration 40: error is 37.516
Iteration 50: error is 36.967
Iteration 60: error is 36.9461
Iteration 70: error is 37.435
Iteration 80: error is 37.5462
Iteration 90: error is 37.6004
Iteration 100: error is 2.3453
Iteration 110: error is 1.2956
Iteration 120: error is 0.93386
Iteration 130: error is 0.79456
Iteration 140: error is 0.6985
Iteration 150: error is 0.66023
Iteration 160: error is 0.65478
Iteration 170: error is 0.65056
Iteration 180: error is 0.64754
Iteration 190: error is 0.64502
Iteration 200: error is 0.64309
Iteration 210: error is 0.64146
Iteration 220: error is 0.64012
Iteration 230: error is 0.639
Iteration 240: error is 0.63808
Iteration 250: error is 0.63723
Iteration 260: error is 0.63593
Iteration 270: error is 0.63452
Iteration 280: error is 0.63337
Iteration 290: error is 0.63259
Iteration 300: error is 0.632
Iteration 310: error is 0.63154
Iteration 320: error is 0.63117
Iteration 330: error is 0.63087
Iteration 340: error is 0.63062
Iteration 350: error is 0.63042
Iteration 360: error is 0.63025
Iteration 370: error is 0.63011
Iteration 380: error is 0.63
Iteration 390: error is 0.6299
Iteration 400: error is 0.62982
Iteration 410: error is 0.62974
Iteration 420: error is 0.62968
Iteration 430: error is 0.62963
Iteration 440: error is 0.62959
Iteration 450: error is 0.62955
Iteration 460: error is 0.62951
Iteration 470: error is 0.62948
Iteration 480: error is 0.62946
Iteration 490: error is 0.62943
Iteration 500: error is 0.62941
Iteration 510: error is 0.6294
Iteration 520: error is 0.62938
Iteration 530: error is 0.62937
Iteration 540: error is 0.62936
Iteration 550: error is 0.62934
Iteration 560: error is 0.62934

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```
Iteration 570: error is 0.62933
Iteration 580: error is 0.62932
Iteration 590: error is 0.62931
Iteration 600: error is 0.62931
Iteration 610: error is 0.6293
Iteration 620: error is 0.6293
Iteration 630: error is 0.62929
Iteration 640: error is 0.62929
Iteration 650: error is 0.62929
Iteration 660: error is 0.62928
Iteration 670: error is 0.62928
Iteration 680: error is 0.62928
Iteration 690: error is 0.62928
Iteration 700: error is 0.62928
Iteration 710: error is 0.62927
Iteration 720: error is 0.62927
Iteration 730: error is 0.62927
Iteration 740: error is 0.62927
Iteration 750: error is 0.62927
Iteration 760: error is 0.62927
Iteration 770: error is 0.62927
Iteration 780: error is 0.62927
Iteration 790: error is 0.62927
Iteration 800: error is 0.62927
Iteration 810: error is 0.62926
Iteration 820: error is 0.62926
Iteration 830: error is 0.62926
Iteration 840: error is 0.62926
Iteration 850: error is 0.62926
Iteration 860: error is 0.62926
Iteration 870: error is 0.62926
Iteration 880: error is 0.62926
Iteration 890: error is 0.62926
Iteration 900: error is 0.62926
Iteration 910: error is 0.62926
Iteration 920: error is 0.62926
Iteration 930: error is 0.62926
Iteration 940: error is 0.62926
Iteration 950: error is 0.62926
Iteration 960: error is 0.62926
Iteration 970: error is 0.62926
Iteration 980: error is 0.62926
Iteration 990: error is 0.62926
Iteration 1000: error is 0.62926
```

```
score = ydata;
figure;
gscatter(score(:,1),score(:,2),true_labs,[],[],22);
```



```
score_tsne = score;
```

MuTrans Dynamical Analysis of the Single-Cell Data

parameter and option settings

```

rng(1)
par.perplex = 150;
par.K_cluster = 10;
par.trials = 100;
par.alpha_scale = 0.5;
par.weight_scale = false;
par.true_labs = true_labs;

% Dynamical Analysis and Output
tic;
Output = DynamicalAnalysis (data, par);

```

```

Mean value of sigma: 0.35425
Minimum value of sigma: 0.23401
Maximum value of sigma: 0.47158
Mean value of sigma: 0.16017
Minimum value of sigma: 0.11114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8168
Iteration 20: error is 36.9587
Iteration 30: error is 36.704
Iteration 40: error is 37.516
Iteration 50: error is 36.967
Iteration 60: error is 36.9461
Iteration 70: error is 37.435
Iteration 80: error is 37.5462

```

Iteration 90: error is 37.6004
Iteration 100: error is 2.3453
Iteration 110: error is 1.2956
Iteration 120: error is 0.93386
Iteration 130: error is 0.79456
Iteration 140: error is 0.6985
Iteration 150: error is 0.66023
Iteration 160: error is 0.65478
Iteration 170: error is 0.65056
Iteration 180: error is 0.64754
Iteration 190: error is 0.64502
Iteration 200: error is 0.64309
Iteration 210: error is 0.64146
Iteration 220: error is 0.64012
Iteration 230: error is 0.639
Iteration 240: error is 0.63808
Iteration 250: error is 0.63723
Iteration 260: error is 0.63593
Iteration 270: error is 0.63452
Iteration 280: error is 0.63337
Iteration 290: error is 0.63259
Iteration 300: error is 0.632
Iteration 310: error is 0.63154
Iteration 320: error is 0.63117
Iteration 330: error is 0.63087
Iteration 340: error is 0.63062
Iteration 350: error is 0.63042
Iteration 360: error is 0.63025
Iteration 370: error is 0.63011
Iteration 380: error is 0.63
Iteration 390: error is 0.6299
Iteration 400: error is 0.62982
Iteration 410: error is 0.62974
Iteration 420: error is 0.62968
Iteration 430: error is 0.62963
Iteration 440: error is 0.62959
Iteration 450: error is 0.62955
Iteration 460: error is 0.62951
Iteration 470: error is 0.62948
Iteration 480: error is 0.62946
Iteration 490: error is 0.62943
Iteration 500: error is 0.62941
Iteration 510: error is 0.6294
Iteration 520: error is 0.62938
Iteration 530: error is 0.62937
Iteration 540: error is 0.62936
Iteration 550: error is 0.62934
Iteration 560: error is 0.62934
Iteration 570: error is 0.62933
Iteration 580: error is 0.62932
Iteration 590: error is 0.62931
Iteration 600: error is 0.62931
Iteration 610: error is 0.6293
Iteration 620: error is 0.6293
Iteration 630: error is 0.62929
Iteration 640: error is 0.62929
Iteration 650: error is 0.62929
Iteration 660: error is 0.62928
Iteration 670: error is 0.62928
Iteration 680: error is 0.62928
Iteration 690: error is 0.62928
Iteration 700: error is 0.62928
Iteration 710: error is 0.62927
Iteration 720: error is 0.62927
Iteration 730: error is 0.62927

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Iteration 740: error is 0.62927
Iteration 750: error is 0.62927
Iteration 760: error is 0.62927
Iteration 770: error is 0.62927
Iteration 780: error is 0.62927
Iteration 790: error is 0.62927
Iteration 800: error is 0.62927
Iteration 810: error is 0.62926
Iteration 820: error is 0.62926
Iteration 830: error is 0.62926
Iteration 840: error is 0.62926
Iteration 850: error is 0.62926
Iteration 860: error is 0.62926
Iteration 870: error is 0.62926
Iteration 880: error is 0.62926
Iteration 890: error is 0.62926
Iteration 900: error is 0.62926
Iteration 910: error is 0.62926
Iteration 920: error is 0.62926
Iteration 930: error is 0.62926
Iteration 940: error is 0.62926
Iteration 950: error is 0.62926
Iteration 960: error is 0.62926
Iteration 970: error is 0.62926
Iteration 980: error is 0.62926
Iteration 990: error is 0.62926
Iteration 1000: error is 0.62926
J_new = 0.8010
J_new = 0.7856
J_new = 0.7618
J_new = 0.7527
J_new = 0.7452
J_new = 0.7447
J_new = 0.7457
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.699
Iteration 20: error is 37.6218
Iteration 30: error is 37.1324
Iteration 40: error is 37.186
Iteration 50: error is 37.4237
Iteration 60: error is 37.6821
Iteration 70: error is 36.8857
Iteration 80: error is 37.5977
Iteration 90: error is 36.9256
Iteration 100: error is 2.2263
Iteration 110: error is 1.2845
Iteration 120: error is 0.91134
Iteration 130: error is 0.75648
Iteration 140: error is 0.70717
Iteration 150: error is 0.67767
Iteration 160: error is 0.66258
Iteration 170: error is 0.65774
Iteration 180: error is 0.65427
Iteration 190: error is 0.65149
Iteration 200: error is 0.64938
Iteration 210: error is 0.64756
Iteration 220: error is 0.64627
Iteration 230: error is 0.64493
Iteration 240: error is 0.64395
Iteration 250: error is 0.64309
Iteration 260: error is 0.64172
Iteration 270: error is 0.64033
Iteration 280: error is 0.63926
```

Iteration 290: error is 0.63847
Iteration 300: error is 0.63789
Iteration 310: error is 0.63744
Iteration 320: error is 0.63707
Iteration 330: error is 0.63678
Iteration 340: error is 0.63655
Iteration 350: error is 0.63635
Iteration 360: error is 0.63619
Iteration 370: error is 0.63606
Iteration 380: error is 0.63595
Iteration 390: error is 0.63586
Iteration 400: error is 0.63579
Iteration 410: error is 0.63572
Iteration 420: error is 0.63566
Iteration 430: error is 0.63562
Iteration 440: error is 0.63557
Iteration 450: error is 0.63554
Iteration 460: error is 0.63551
Iteration 470: error is 0.63548
Iteration 480: error is 0.63545
Iteration 490: error is 0.63543
Iteration 500: error is 0.63542
Iteration 510: error is 0.6354
Iteration 520: error is 0.63539
Iteration 530: error is 0.63537
Iteration 540: error is 0.63536
Iteration 550: error is 0.63535
Iteration 560: error is 0.63534
Iteration 570: error is 0.63534
Iteration 580: error is 0.63533
Iteration 590: error is 0.63532
Iteration 600: error is 0.63532
Iteration 610: error is 0.63531
Iteration 620: error is 0.63531
Iteration 630: error is 0.6353
Iteration 640: error is 0.6353
Iteration 650: error is 0.6353
Iteration 660: error is 0.63529
Iteration 670: error is 0.63529
Iteration 680: error is 0.63529
Iteration 690: error is 0.63529
Iteration 700: error is 0.63529
Iteration 710: error is 0.63528
Iteration 720: error is 0.63528
Iteration 730: error is 0.63528
Iteration 740: error is 0.63528
Iteration 750: error is 0.63528
Iteration 760: error is 0.63528
Iteration 770: error is 0.63528
Iteration 780: error is 0.63528
Iteration 790: error is 0.63528
Iteration 800: error is 0.63527
Iteration 810: error is 0.63527
Iteration 820: error is 0.63527
Iteration 830: error is 0.63527
Iteration 840: error is 0.63527
Iteration 850: error is 0.63527
Iteration 860: error is 0.63527
Iteration 870: error is 0.63527
Iteration 880: error is 0.63527
Iteration 890: error is 0.63527
Iteration 900: error is 0.63527
Iteration 910: error is 0.63527
Iteration 920: error is 0.63527
Iteration 930: error is 0.63527

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Iteration 940: error is 0.63527
Iteration 950: error is 0.63527
Iteration 960: error is 0.63527
Iteration 970: error is 0.63527
Iteration 980: error is 0.63527
Iteration 990: error is 0.63527
Iteration 1000: error is 0.63527
J_new = 0.8446
J_new = 0.8322
J_new = 0.8227
J_new = 0.8215
J_new = 0.8224
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6841
Iteration 20: error is 37.0154
Iteration 30: error is 36.2829
Iteration 40: error is 37.1514
Iteration 50: error is 37.4457
Iteration 60: error is 37.2178
Iteration 70: error is 37.7066
Iteration 80: error is 37.2182
Iteration 90: error is 37.7304
Iteration 100: error is 2.1254
Iteration 110: error is 1.255
Iteration 120: error is 0.808
Iteration 130: error is 0.7124
Iteration 140: error is 0.68225
Iteration 150: error is 0.67087
Iteration 160: error is 0.66272
Iteration 170: error is 0.65805
Iteration 180: error is 0.6544
Iteration 190: error is 0.65163
Iteration 200: error is 0.64937
Iteration 210: error is 0.64784
Iteration 220: error is 0.64606
Iteration 230: error is 0.64483
Iteration 240: error is 0.64376
Iteration 250: error is 0.64286
Iteration 260: error is 0.64143
Iteration 270: error is 0.63993
Iteration 280: error is 0.63875
Iteration 290: error is 0.63784
Iteration 300: error is 0.63716
Iteration 310: error is 0.63666
Iteration 320: error is 0.63625
Iteration 330: error is 0.63593
Iteration 340: error is 0.63567
Iteration 350: error is 0.63545
Iteration 360: error is 0.63527
Iteration 370: error is 0.63512
Iteration 380: error is 0.63501
Iteration 390: error is 0.6349
Iteration 400: error is 0.63481
Iteration 410: error is 0.63473
Iteration 420: error is 0.63467
Iteration 430: error is 0.63461
Iteration 440: error is 0.63456
Iteration 450: error is 0.63452
Iteration 460: error is 0.63449
Iteration 470: error is 0.63445
Iteration 480: error is 0.63442
Iteration 490: error is 0.6344
Iteration 500: error is 0.63438
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```
Iteration 510: error is 0.63436
Iteration 520: error is 0.63434
Iteration 530: error is 0.63433
Iteration 540: error is 0.63431
Iteration 550: error is 0.6343
Iteration 560: error is 0.63429
Iteration 570: error is 0.63428
Iteration 580: error is 0.63427
Iteration 590: error is 0.63426
Iteration 600: error is 0.63426
Iteration 610: error is 0.63425
Iteration 620: error is 0.63425
Iteration 630: error is 0.63424
Iteration 640: error is 0.63424
Iteration 650: error is 0.63423
Iteration 660: error is 0.63423
Iteration 670: error is 0.63423
Iteration 680: error is 0.63422
Iteration 690: error is 0.63422
Iteration 700: error is 0.63422
Iteration 710: error is 0.63422
Iteration 720: error is 0.63421
Iteration 730: error is 0.63421
Iteration 740: error is 0.63421
Iteration 750: error is 0.63421
Iteration 760: error is 0.63421
Iteration 770: error is 0.63421
Iteration 780: error is 0.63421
Iteration 790: error is 0.6342
Iteration 800: error is 0.6342
Iteration 810: error is 0.6342
Iteration 820: error is 0.6342
Iteration 830: error is 0.6342
Iteration 840: error is 0.6342
Iteration 850: error is 0.6342
Iteration 860: error is 0.6342
Iteration 870: error is 0.6342
Iteration 880: error is 0.6342
Iteration 890: error is 0.6342
Iteration 900: error is 0.6342
Iteration 910: error is 0.6342
Iteration 920: error is 0.6342
Iteration 930: error is 0.6342
Iteration 940: error is 0.6342
Iteration 950: error is 0.6342
Iteration 960: error is 0.6342
Iteration 970: error is 0.6342
Iteration 980: error is 0.6342
Iteration 990: error is 0.6342
Iteration 1000: error is 0.6342
J_new = 0.8090
J_new = 0.7909
J_new = 0.7623
J_new = 0.7525
J_new = 0.7448
J_new = 0.7444
J_new = 0.7453
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.5673
Iteration 20: error is 37.3075
Iteration 30: error is 37.027
Iteration 40: error is 37.3852
Iteration 50: error is 36.7441
```

Iteration 60: error is 37.3944
Iteration 70: error is 37.558
Iteration 80: error is 36.7687
Iteration 90: error is 37.556
Iteration 100: error is 2.1722
Iteration 110: error is 1.2275
Iteration 120: error is 0.76975
Iteration 130: error is 0.69821
Iteration 140: error is 0.68231
Iteration 150: error is 0.67258
Iteration 160: error is 0.66568
Iteration 170: error is 0.66089
Iteration 180: error is 0.65713
Iteration 190: error is 0.65443
Iteration 200: error is 0.65202
Iteration 210: error is 0.65016
Iteration 220: error is 0.64852
Iteration 230: error is 0.64625
Iteration 240: error is 0.64487
Iteration 250: error is 0.64385
Iteration 260: error is 0.64226
Iteration 270: error is 0.64069
Iteration 280: error is 0.63953
Iteration 290: error is 0.63863
Iteration 300: error is 0.63795
Iteration 310: error is 0.63744
Iteration 320: error is 0.63704
Iteration 330: error is 0.63671
Iteration 340: error is 0.63643
Iteration 350: error is 0.63622
Iteration 360: error is 0.63604
Iteration 370: error is 0.63588
Iteration 380: error is 0.63575
Iteration 390: error is 0.63564
Iteration 400: error is 0.63554
Iteration 410: error is 0.63547
Iteration 420: error is 0.6354
Iteration 430: error is 0.63533
Iteration 440: error is 0.63528
Iteration 450: error is 0.63524
Iteration 460: error is 0.6352
Iteration 470: error is 0.63516
Iteration 480: error is 0.63513
Iteration 490: error is 0.6351
Iteration 500: error is 0.63508
Iteration 510: error is 0.63506
Iteration 520: error is 0.63504
Iteration 530: error is 0.63502
Iteration 540: error is 0.63501
Iteration 550: error is 0.635
Iteration 560: error is 0.63499
Iteration 570: error is 0.63497
Iteration 580: error is 0.63497
Iteration 590: error is 0.63496
Iteration 600: error is 0.63495
Iteration 610: error is 0.63494
Iteration 620: error is 0.63494
Iteration 630: error is 0.63493
Iteration 640: error is 0.63493
Iteration 650: error is 0.63492
Iteration 660: error is 0.63492
Iteration 670: error is 0.63491
Iteration 680: error is 0.63491
Iteration 690: error is 0.63491
Iteration 700: error is 0.6349

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Iteration 710: error is 0.6349
Iteration 720: error is 0.6349
Iteration 730: error is 0.6349
Iteration 740: error is 0.6349
Iteration 750: error is 0.63489
Iteration 760: error is 0.63489
Iteration 770: error is 0.63489
Iteration 780: error is 0.63489
Iteration 790: error is 0.63489
Iteration 800: error is 0.63489
Iteration 810: error is 0.63489
Iteration 820: error is 0.63489
Iteration 830: error is 0.63488
Iteration 840: error is 0.63488
Iteration 850: error is 0.63488
Iteration 860: error is 0.63488
Iteration 870: error is 0.63488
Iteration 880: error is 0.63488
Iteration 890: error is 0.63488
Iteration 900: error is 0.63488
Iteration 910: error is 0.63488
Iteration 920: error is 0.63488
Iteration 930: error is 0.63488
Iteration 940: error is 0.63488
Iteration 950: error is 0.63488
Iteration 960: error is 0.63488
Iteration 970: error is 0.63488
Iteration 980: error is 0.63488
Iteration 990: error is 0.63488
Iteration 1000: error is 0.63488
J_new = 0.8513
J_new = 0.8274
J_new = 0.8155
J_new = 0.8119
J_new = 0.8102
J_new = 0.8057
J_new = 0.8010
J_new = 0.7854
J_new = 0.7435
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4508
Iteration 20: error is 37.3282
Iteration 30: error is 37.0523
Iteration 40: error is 37.165
Iteration 50: error is 37.0856
Iteration 60: error is 37.4802
Iteration 70: error is 37.5396
Iteration 80: error is 37.5722
Iteration 90: error is 37.7045
Iteration 100: error is 2.3521
Iteration 110: error is 1.3028
Iteration 120: error is 0.95392
Iteration 130: error is 0.83373
Iteration 140: error is 0.6911
Iteration 150: error is 0.66867
Iteration 160: error is 0.66258
Iteration 170: error is 0.65815
Iteration 180: error is 0.65502
Iteration 190: error is 0.65255
Iteration 200: error is 0.65048
Iteration 210: error is 0.64889
```

Iteration 220: error is 0.64743
Iteration 230: error is 0.64628
Iteration 240: error is 0.64527
Iteration 250: error is 0.64443
Iteration 260: error is 0.64309
Iteration 270: error is 0.64168
Iteration 280: error is 0.6406
Iteration 290: error is 0.63979
Iteration 300: error is 0.6392
Iteration 310: error is 0.63873
Iteration 320: error is 0.63836
Iteration 330: error is 0.63807
Iteration 340: error is 0.63783
Iteration 350: error is 0.63764
Iteration 360: error is 0.63749
Iteration 370: error is 0.63735
Iteration 380: error is 0.63724
Iteration 390: error is 0.63716
Iteration 400: error is 0.63708
Iteration 410: error is 0.63701
Iteration 420: error is 0.63696
Iteration 430: error is 0.63691
Iteration 440: error is 0.63686
Iteration 450: error is 0.63683
Iteration 460: error is 0.6368
Iteration 470: error is 0.63677
Iteration 480: error is 0.63674
Iteration 490: error is 0.63672
Iteration 500: error is 0.6367
Iteration 510: error is 0.63669
Iteration 520: error is 0.63667
Iteration 530: error is 0.63666
Iteration 540: error is 0.63665
Iteration 550: error is 0.63664
Iteration 560: error is 0.63663
Iteration 570: error is 0.63663
Iteration 580: error is 0.63662
Iteration 590: error is 0.63661
Iteration 600: error is 0.63661
Iteration 610: error is 0.6366
Iteration 620: error is 0.6366
Iteration 630: error is 0.6366
Iteration 640: error is 0.63659
Iteration 650: error is 0.63659
Iteration 660: error is 0.63659
Iteration 670: error is 0.63659
Iteration 680: error is 0.63658
Iteration 690: error is 0.63658
Iteration 700: error is 0.63658
Iteration 710: error is 0.63658
Iteration 720: error is 0.63658
Iteration 730: error is 0.63658
Iteration 740: error is 0.63657
Iteration 750: error is 0.63657
Iteration 760: error is 0.63657
Iteration 770: error is 0.63657
Iteration 780: error is 0.63657
Iteration 790: error is 0.63657
Iteration 800: error is 0.63657
Iteration 810: error is 0.63657
Iteration 820: error is 0.63657
Iteration 830: error is 0.63657
Iteration 840: error is 0.63657
Iteration 850: error is 0.63657
Iteration 860: error is 0.63657

```
Iteration 870: error is 0.63657
Iteration 880: error is 0.63657
Iteration 890: error is 0.63657
Iteration 900: error is 0.63657
Iteration 910: error is 0.63657
Iteration 920: error is 0.63657
Iteration 930: error is 0.63657
Iteration 940: error is 0.63657
Iteration 950: error is 0.63657
Iteration 960: error is 0.63657
Iteration 970: error is 0.63657
Iteration 980: error is 0.63657
Iteration 990: error is 0.63657
Iteration 1000: error is 0.63657
J_new = 0.8441
J_new = 0.8274
J_new = 0.8165
J_new = 0.8145
J_new = 0.8122
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.9307
Iteration 20: error is 37.4016
Iteration 30: error is 36.6906
Iteration 40: error is 37.1525
Iteration 50: error is 37.2617
Iteration 60: error is 37.4248
Iteration 70: error is 37.0431
Iteration 80: error is 37.3489
Iteration 90: error is 37.5493
Iteration 100: error is 2.2807
Iteration 110: error is 1.2888
Iteration 120: error is 0.83559
Iteration 130: error is 0.69718
Iteration 140: error is 0.68178
Iteration 150: error is 0.66965
Iteration 160: error is 0.663
Iteration 170: error is 0.65819
Iteration 180: error is 0.65461
Iteration 190: error is 0.65177
Iteration 200: error is 0.64952
Iteration 210: error is 0.64771
Iteration 220: error is 0.64623
Iteration 230: error is 0.64499
Iteration 240: error is 0.64391
Iteration 250: error is 0.64301
Iteration 260: error is 0.64157
Iteration 270: error is 0.64003
Iteration 280: error is 0.63893
Iteration 290: error is 0.6381
Iteration 300: error is 0.63745
Iteration 310: error is 0.63694
Iteration 320: error is 0.63656
Iteration 330: error is 0.63625
Iteration 340: error is 0.636
Iteration 350: error is 0.63579
```

Iteration 360: error is 0.63563
Iteration 370: error is 0.63548
Iteration 380: error is 0.63536
Iteration 390: error is 0.63526
Iteration 400: error is 0.63517
Iteration 410: error is 0.6351
Iteration 420: error is 0.63503
Iteration 430: error is 0.63498
Iteration 440: error is 0.63493
Iteration 450: error is 0.63489
Iteration 460: error is 0.63486
Iteration 470: error is 0.63482
Iteration 480: error is 0.6348
Iteration 490: error is 0.63477
Iteration 500: error is 0.63475
Iteration 510: error is 0.63473
Iteration 520: error is 0.63472
Iteration 530: error is 0.6347
Iteration 540: error is 0.63469
Iteration 550: error is 0.63468
Iteration 560: error is 0.63467
Iteration 570: error is 0.63466
Iteration 580: error is 0.63465
Iteration 590: error is 0.63465
Iteration 600: error is 0.63464
Iteration 610: error is 0.63463
Iteration 620: error is 0.63463
Iteration 630: error is 0.63462
Iteration 640: error is 0.63462
Iteration 650: error is 0.63462
Iteration 660: error is 0.63461
Iteration 670: error is 0.63461
Iteration 680: error is 0.63461
Iteration 690: error is 0.63461
Iteration 700: error is 0.6346
Iteration 710: error is 0.6346
Iteration 720: error is 0.6346
Iteration 730: error is 0.6346
Iteration 740: error is 0.6346
Iteration 750: error is 0.6346
Iteration 760: error is 0.63459
Iteration 770: error is 0.63459
Iteration 780: error is 0.63459
Iteration 790: error is 0.63459
Iteration 800: error is 0.63459
Iteration 810: error is 0.63459
Iteration 820: error is 0.63459
Iteration 830: error is 0.63459
Iteration 840: error is 0.63459
Iteration 850: error is 0.63459
Iteration 860: error is 0.63459
Iteration 870: error is 0.63459
Iteration 880: error is 0.63459
Iteration 890: error is 0.63459
Iteration 900: error is 0.63459
Iteration 910: error is 0.63459
Iteration 920: error is 0.63459
Iteration 930: error is 0.63459
Iteration 940: error is 0.63459
Iteration 950: error is 0.63458
Iteration 960: error is 0.63458
Iteration 970: error is 0.63458
Iteration 980: error is 0.63458
Iteration 990: error is 0.63458
Iteration 1000: error is 0.63458

```
J_new = 0.8363
J_new = 0.8202
J_new = 0.8167
J_new = 0.8159
J_new = 0.8136
J_new = 0.8117
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.032
Iteration 20: error is 37.2251
Iteration 30: error is 36.8731
Iteration 40: error is 37.0864
Iteration 50: error is 37.2202
Iteration 60: error is 37.5003
Iteration 70: error is 37.8653
Iteration 80: error is 37.7699
Iteration 90: error is 37.9647
Iteration 100: error is 2.2186
Iteration 110: error is 1.5456
Iteration 120: error is 1.1612
Iteration 130: error is 0.97206
Iteration 140: error is 0.89359
Iteration 150: error is 0.73161
Iteration 160: error is 0.72242
Iteration 170: error is 0.67368
Iteration 180: error is 0.6529
Iteration 190: error is 0.65208
Iteration 200: error is 0.64636
Iteration 210: error is 0.64494
Iteration 220: error is 0.64358
Iteration 230: error is 0.64233
Iteration 240: error is 0.64143
Iteration 250: error is 0.64069
Iteration 260: error is 0.6395
Iteration 270: error is 0.63824
Iteration 280: error is 0.63731
Iteration 290: error is 0.63663
Iteration 300: error is 0.63611
Iteration 310: error is 0.6357
Iteration 320: error is 0.63537
Iteration 330: error is 0.63511
Iteration 340: error is 0.63491
Iteration 350: error is 0.63473
Iteration 360: error is 0.63459
Iteration 370: error is 0.63447
Iteration 380: error is 0.63438
Iteration 390: error is 0.63429
Iteration 400: error is 0.63422
Iteration 410: error is 0.63416
Iteration 420: error is 0.63392
Iteration 430: error is 0.63402
Iteration 440: error is 0.63366
Iteration 450: error is 0.63361
Iteration 460: error is 0.63358
Iteration 470: error is 0.63355
Iteration 480: error is 0.63353
```

```
Iteration 490: error is 0.63351
Iteration 500: error is 0.63349
Iteration 510: error is 0.63347
Iteration 520: error is 0.63346
Iteration 530: error is 0.63345
Iteration 540: error is 0.63344
Iteration 550: error is 0.63343
Iteration 560: error is 0.63342
Iteration 570: error is 0.63341
Iteration 580: error is 0.63341
Iteration 590: error is 0.6334
Iteration 600: error is 0.63339
Iteration 610: error is 0.63339
Iteration 620: error is 0.63339
Iteration 630: error is 0.63338
Iteration 640: error is 0.63338
Iteration 650: error is 0.63338
Iteration 660: error is 0.63337
Iteration 670: error is 0.63337
Iteration 680: error is 0.63337
Iteration 690: error is 0.63337
Iteration 700: error is 0.63337
Iteration 710: error is 0.63337
Iteration 720: error is 0.63336
Iteration 730: error is 0.63336
Iteration 740: error is 0.63336
Iteration 750: error is 0.63336
Iteration 760: error is 0.63336
Iteration 770: error is 0.63336
Iteration 780: error is 0.63336
Iteration 790: error is 0.63336
Iteration 800: error is 0.63336
Iteration 810: error is 0.63336
Iteration 820: error is 0.63336
Iteration 830: error is 0.63336
Iteration 840: error is 0.63336
Iteration 850: error is 0.63336
Iteration 860: error is 0.63336
Iteration 870: error is 0.63336
Iteration 880: error is 0.63335
Iteration 890: error is 0.63335
Iteration 900: error is 0.63335
Iteration 910: error is 0.63335
Iteration 920: error is 0.63335
Iteration 930: error is 0.63335
Iteration 940: error is 0.63335
Iteration 950: error is 0.63335
Iteration 960: error is 0.63335
Iteration 970: error is 0.63335
Iteration 980: error is 0.63335
Iteration 990: error is 0.63335
Iteration 1000: error is 0.63335
J_new = 0.7890
J_new = 0.7614
J_new = 0.7524
J_new = 0.7448
J_new = 0.7444
J_new = 0.7453
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8452
Iteration 20: error is 36.8708
Iteration 30: error is 37.2209
Iteration 40: error is 37.3125
```

Iteration 50: error is 37.2101
Iteration 60: error is 37.5151
Iteration 70: error is 36.8521
Iteration 80: error is 37.6564
Iteration 90: error is 37.6055
Iteration 100: error is 2.2291
Iteration 110: error is 1.3095
Iteration 120: error is 1.0519
Iteration 130: error is 0.911
Iteration 140: error is 0.80854
Iteration 150: error is 0.68966
Iteration 160: error is 0.68547
Iteration 170: error is 0.66962
Iteration 180: error is 0.66633
Iteration 190: error is 0.6636
Iteration 200: error is 0.66161
Iteration 210: error is 0.65983
Iteration 220: error is 0.65842
Iteration 230: error is 0.65748
Iteration 240: error is 0.65622
Iteration 250: error is 0.65535
Iteration 260: error is 0.65397
Iteration 270: error is 0.65243
Iteration 280: error is 0.65132
Iteration 290: error is 0.65053
Iteration 300: error is 0.64992
Iteration 310: error is 0.64943
Iteration 320: error is 0.64904
Iteration 330: error is 0.64873
Iteration 340: error is 0.64847
Iteration 350: error is 0.64826
Iteration 360: error is 0.64809
Iteration 370: error is 0.64794
Iteration 380: error is 0.64781
Iteration 390: error is 0.64771
Iteration 400: error is 0.64762
Iteration 410: error is 0.64754
Iteration 420: error is 0.64747
Iteration 430: error is 0.64742
Iteration 440: error is 0.64737
Iteration 450: error is 0.64732
Iteration 460: error is 0.64729
Iteration 470: error is 0.64725
Iteration 480: error is 0.64722
Iteration 490: error is 0.6472
Iteration 500: error is 0.64718
Iteration 510: error is 0.64716
Iteration 520: error is 0.64714
Iteration 530: error is 0.64712
Iteration 540: error is 0.64711
Iteration 550: error is 0.64709
Iteration 560: error is 0.64708
Iteration 570: error is 0.64707
Iteration 580: error is 0.64706
Iteration 590: error is 0.64705
Iteration 600: error is 0.64705
Iteration 610: error is 0.64704
Iteration 620: error is 0.64703
Iteration 630: error is 0.64703
Iteration 640: error is 0.64702
Iteration 650: error is 0.64702
Iteration 660: error is 0.64701
Iteration 670: error is 0.64701
Iteration 680: error is 0.647
Iteration 690: error is 0.647

```
Iteration 700: error is 0.647
Iteration 710: error is 0.64699
Iteration 720: error is 0.64699
Iteration 730: error is 0.64699
Iteration 740: error is 0.64699
Iteration 750: error is 0.64698
Iteration 760: error is 0.64698
Iteration 770: error is 0.64698
Iteration 780: error is 0.64698
Iteration 790: error is 0.64698
Iteration 800: error is 0.64698
Iteration 810: error is 0.64697
Iteration 820: error is 0.64697
Iteration 830: error is 0.64697
Iteration 840: error is 0.64697
Iteration 850: error is 0.64697
Iteration 860: error is 0.64697
Iteration 870: error is 0.64697
Iteration 880: error is 0.64697
Iteration 890: error is 0.64697
Iteration 900: error is 0.64696
Iteration 910: error is 0.64696
Iteration 920: error is 0.64696
Iteration 930: error is 0.64696
Iteration 940: error is 0.64696
Iteration 950: error is 0.64696
Iteration 960: error is 0.64696
Iteration 970: error is 0.64696
Iteration 980: error is 0.64696
Iteration 990: error is 0.64696
Iteration 1000: error is 0.64696
J_new = 0.8711
J_new = 0.8422
J_new = 0.8223
J_new = 0.8115
J_new = 0.8090
J_new = 0.8064
J_new = 0.7997
J_new = 0.7860
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6785
Iteration 20: error is 36.5532
Iteration 30: error is 36.3915
Iteration 40: error is 36.4791
Iteration 50: error is 36.8499
Iteration 60: error is 36.8137
Iteration 70: error is 36.9157
Iteration 80: error is 36.9918
Iteration 90: error is 37.8186
Iteration 100: error is 2.2581
Iteration 110: error is 1.2752
Iteration 120: error is 0.91516
Iteration 130: error is 0.77904
Iteration 140: error is 0.73195
Iteration 150: error is 0.67895
Iteration 160: error is 0.67064
Iteration 170: error is 0.66638
Iteration 180: error is 0.66318
Iteration 190: error is 0.6607
Iteration 200: error is 0.65867
Iteration 210: error is 0.65701
```

Iteration 220: error is 0.65567
Iteration 230: error is 0.65451
Iteration 240: error is 0.65353
Iteration 250: error is 0.6527
Iteration 260: error is 0.65136
Iteration 270: error is 0.64998
Iteration 280: error is 0.64883
Iteration 290: error is 0.64801
Iteration 300: error is 0.64741
Iteration 310: error is 0.64696
Iteration 320: error is 0.6466
Iteration 330: error is 0.64631
Iteration 340: error is 0.64607
Iteration 350: error is 0.64588
Iteration 360: error is 0.64572
Iteration 370: error is 0.64558
Iteration 380: error is 0.64547
Iteration 390: error is 0.64538
Iteration 400: error is 0.6453
Iteration 410: error is 0.64524
Iteration 420: error is 0.64518
Iteration 430: error is 0.64513
Iteration 440: error is 0.64509
Iteration 450: error is 0.64505
Iteration 460: error is 0.64502
Iteration 470: error is 0.64499
Iteration 480: error is 0.64497
Iteration 490: error is 0.64495
Iteration 500: error is 0.64493
Iteration 510: error is 0.64492
Iteration 520: error is 0.6449
Iteration 530: error is 0.64489
Iteration 540: error is 0.64488
Iteration 550: error is 0.64487
Iteration 560: error is 0.64486
Iteration 570: error is 0.64485
Iteration 580: error is 0.64485
Iteration 590: error is 0.64484
Iteration 600: error is 0.64484
Iteration 610: error is 0.64483
Iteration 620: error is 0.64483
Iteration 630: error is 0.64482
Iteration 640: error is 0.64482
Iteration 650: error is 0.64482
Iteration 660: error is 0.64482
Iteration 670: error is 0.64481
Iteration 680: error is 0.64481
Iteration 690: error is 0.64481
Iteration 700: error is 0.64481
Iteration 710: error is 0.64481
Iteration 720: error is 0.6448
Iteration 730: error is 0.6448
Iteration 740: error is 0.6448
Iteration 750: error is 0.6448
Iteration 760: error is 0.6448
Iteration 770: error is 0.6448
Iteration 780: error is 0.6448
Iteration 790: error is 0.64479
Iteration 800: error is 0.64478
Iteration 810: error is 0.64478
Iteration 820: error is 0.64477
Iteration 830: error is 0.64477
Iteration 840: error is 0.64477
Iteration 850: error is 0.64477
Iteration 860: error is 0.64477

```
Iteration 870: error is 0.64477
Iteration 880: error is 0.64477
Iteration 890: error is 0.64477
Iteration 900: error is 0.64477
Iteration 910: error is 0.64477
Iteration 920: error is 0.64477
Iteration 930: error is 0.64477
Iteration 940: error is 0.64477
Iteration 950: error is 0.64477
Iteration 960: error is 0.64477
Iteration 970: error is 0.64477
Iteration 980: error is 0.64477
Iteration 990: error is 0.64477
Iteration 1000: error is 0.64477
J_new = 0.8340
J_new = 0.8194
J_new = 0.8158
J_new = 0.8154
J_new = 0.8111
J_new = 0.8092
J_new = 0.8054
J_new = 0.8036
J_new = 0.7898
J_new = 0.7825
J_new = 0.7420
J_new = 0.7429
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1811
Iteration 20: error is 37.4352
Iteration 30: error is 37.1782
Iteration 40: error is 37.3707
Iteration 50: error is 37.3619
Iteration 60: error is 37.805
Iteration 70: error is 38.2211
Iteration 80: error is 37.9647
Iteration 90: error is 38.6443
Iteration 100: error is 2.4735
Iteration 110: error is 1.4213
Iteration 120: error is 0.86165
Iteration 130: error is 0.79373
Iteration 140: error is 0.69251
Iteration 150: error is 0.68115
Iteration 160: error is 0.67312
Iteration 170: error is 0.66813
Iteration 180: error is 0.66469
Iteration 190: error is 0.66204
Iteration 200: error is 0.65987
Iteration 210: error is 0.65655
Iteration 220: error is 0.64802
Iteration 230: error is 0.64389
Iteration 240: error is 0.64275
Iteration 250: error is 0.6418
Iteration 260: error is 0.64026
Iteration 270: error is 0.63865
Iteration 280: error is 0.63742
Iteration 290: error is 0.63658
Iteration 300: error is 0.63595
Iteration 310: error is 0.63545
Iteration 320: error is 0.63504
Iteration 330: error is 0.63472
Iteration 340: error is 0.63445
Iteration 350: error is 0.63423
Iteration 360: error is 0.63406
```

```
Iteration 370: error is 0.63391
Iteration 380: error is 0.63378
Iteration 390: error is 0.63367
Iteration 400: error is 0.63358
Iteration 410: error is 0.63351
Iteration 420: error is 0.63344
Iteration 430: error is 0.63338
Iteration 440: error is 0.63333
Iteration 450: error is 0.63329
Iteration 460: error is 0.63326
Iteration 470: error is 0.63322
Iteration 480: error is 0.63319
Iteration 490: error is 0.63317
Iteration 500: error is 0.63315
Iteration 510: error is 0.63313
Iteration 520: error is 0.63311
Iteration 530: error is 0.63309
Iteration 540: error is 0.63308
Iteration 550: error is 0.63307
Iteration 560: error is 0.63306
Iteration 570: error is 0.63305
Iteration 580: error is 0.63304
Iteration 590: error is 0.63303
Iteration 600: error is 0.63303
Iteration 610: error is 0.63302
Iteration 620: error is 0.63302
Iteration 630: error is 0.63301
Iteration 640: error is 0.63301
Iteration 650: error is 0.633
Iteration 660: error is 0.633
Iteration 670: error is 0.633
Iteration 680: error is 0.63299
Iteration 690: error is 0.63299
Iteration 700: error is 0.63299
Iteration 710: error is 0.63299
Iteration 720: error is 0.63298
Iteration 730: error is 0.63298
Iteration 740: error is 0.63298
Iteration 750: error is 0.63298
Iteration 760: error is 0.63298
Iteration 770: error is 0.63298
Iteration 780: error is 0.63298
Iteration 790: error is 0.63298
Iteration 800: error is 0.63297
Iteration 810: error is 0.63297
Iteration 820: error is 0.63297
Iteration 830: error is 0.63297
Iteration 840: error is 0.63297
Iteration 850: error is 0.63297
Iteration 860: error is 0.63297
Iteration 870: error is 0.63297
Iteration 880: error is 0.63297
Iteration 890: error is 0.63297
Iteration 900: error is 0.63297
Iteration 910: error is 0.63297
Iteration 920: error is 0.63297
Iteration 930: error is 0.63297
Iteration 940: error is 0.63297
Iteration 950: error is 0.63297
Iteration 960: error is 0.63297
Iteration 970: error is 0.63297
Iteration 980: error is 0.63297
Iteration 990: error is 0.63297
Iteration 1000: error is 0.63297
J_new = 0.8348
```

```
J_new = 0.8193
J_new = 0.8172
J_new = 0.8161
J_new = 0.8139
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9152
Iteration 20: error is 37.0837
Iteration 30: error is 36.7335
Iteration 40: error is 36.7648
Iteration 50: error is 36.656
Iteration 60: error is 37.3426
Iteration 70: error is 37.3334
Iteration 80: error is 37.5472
Iteration 90: error is 37.9992
Iteration 100: error is 2.3846
Iteration 110: error is 1.3028
Iteration 120: error is 0.82037
Iteration 130: error is 0.72765
Iteration 140: error is 0.67435
Iteration 150: error is 0.66227
Iteration 160: error is 0.6555
Iteration 170: error is 0.65015
Iteration 180: error is 0.64735
Iteration 190: error is 0.64393
Iteration 200: error is 0.64172
Iteration 210: error is 0.63978
Iteration 220: error is 0.63822
Iteration 230: error is 0.63692
Iteration 240: error is 0.63591
Iteration 250: error is 0.63497
Iteration 260: error is 0.63355
Iteration 270: error is 0.63206
Iteration 280: error is 0.63092
Iteration 290: error is 0.63008
Iteration 300: error is 0.62944
Iteration 310: error is 0.62894
Iteration 320: error is 0.62855
Iteration 330: error is 0.62824
Iteration 340: error is 0.62799
Iteration 350: error is 0.62777
Iteration 360: error is 0.62759
Iteration 370: error is 0.62744
Iteration 380: error is 0.62731
Iteration 390: error is 0.62721
Iteration 400: error is 0.62711
Iteration 410: error is 0.62703
Iteration 420: error is 0.62697
Iteration 430: error is 0.62691
Iteration 440: error is 0.62686
Iteration 450: error is 0.62682
Iteration 460: error is 0.62678
Iteration 470: error is 0.62674
Iteration 480: error is 0.62672
Iteration 490: error is 0.62669
```

```
Iteration 500: error is 0.62667
Iteration 510: error is 0.62665
Iteration 520: error is 0.62663
Iteration 530: error is 0.62662
Iteration 540: error is 0.62661
Iteration 550: error is 0.62659
Iteration 560: error is 0.62658
Iteration 570: error is 0.62657
Iteration 580: error is 0.62657
Iteration 590: error is 0.62656
Iteration 600: error is 0.62655
Iteration 610: error is 0.62655
Iteration 620: error is 0.62654
Iteration 630: error is 0.62654
Iteration 640: error is 0.62653
Iteration 650: error is 0.62653
Iteration 660: error is 0.62653
Iteration 670: error is 0.62652
Iteration 680: error is 0.62652
Iteration 690: error is 0.62652
Iteration 700: error is 0.62652
Iteration 710: error is 0.62651
Iteration 720: error is 0.62651
Iteration 730: error is 0.62651
Iteration 740: error is 0.62651
Iteration 750: error is 0.62651
Iteration 760: error is 0.62651
Iteration 770: error is 0.62651
Iteration 780: error is 0.6265
Iteration 790: error is 0.6265
Iteration 800: error is 0.6265
Iteration 810: error is 0.6265
Iteration 820: error is 0.6265
Iteration 830: error is 0.6265
Iteration 840: error is 0.6265
Iteration 850: error is 0.6265
Iteration 860: error is 0.6265
Iteration 870: error is 0.6265
Iteration 880: error is 0.6265
Iteration 890: error is 0.6265
Iteration 900: error is 0.6265
Iteration 910: error is 0.6265
Iteration 920: error is 0.6265
Iteration 930: error is 0.6265
Iteration 940: error is 0.6265
Iteration 950: error is 0.6265
Iteration 960: error is 0.6265
Iteration 970: error is 0.6265
Iteration 980: error is 0.6265
Iteration 990: error is 0.6265
Iteration 1000: error is 0.6265
J_new = 0.8061
J_new = 0.7916
J_new = 0.7639
J_new = 0.7484
J_new = 0.7397
J_new = 0.7390
J_new = 0.7401
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.9916
Iteration 20: error is 37.0418
Iteration 30: error is 36.5889
Iteration 40: error is 37.1503
```

Iteration 50: error is 37.1379
Iteration 60: error is 37.6936
Iteration 70: error is 37.6005
Iteration 80: error is 37.2716
Iteration 90: error is 37.7511
Iteration 100: error is 2.3522
Iteration 110: error is 1.2407
Iteration 120: error is 0.89383
Iteration 130: error is 0.71478
Iteration 140: error is 0.69182
Iteration 150: error is 0.67576
Iteration 160: error is 0.67053
Iteration 170: error is 0.6657
Iteration 180: error is 0.66237
Iteration 190: error is 0.65998
Iteration 200: error is 0.65781
Iteration 210: error is 0.65605
Iteration 220: error is 0.65464
Iteration 230: error is 0.65348
Iteration 240: error is 0.65251
Iteration 250: error is 0.65167
Iteration 260: error is 0.65036
Iteration 270: error is 0.6489
Iteration 280: error is 0.64786
Iteration 290: error is 0.64706
Iteration 300: error is 0.64646
Iteration 310: error is 0.64601
Iteration 320: error is 0.64565
Iteration 330: error is 0.64535
Iteration 340: error is 0.64511
Iteration 350: error is 0.64492
Iteration 360: error is 0.64476
Iteration 370: error is 0.64463
Iteration 380: error is 0.64452
Iteration 390: error is 0.64443
Iteration 400: error is 0.64435
Iteration 410: error is 0.64428
Iteration 420: error is 0.64423
Iteration 430: error is 0.64418
Iteration 440: error is 0.64414
Iteration 450: error is 0.6441
Iteration 460: error is 0.64407
Iteration 470: error is 0.64404
Iteration 480: error is 0.64402
Iteration 490: error is 0.644
Iteration 500: error is 0.64398
Iteration 510: error is 0.64396
Iteration 520: error is 0.64395
Iteration 530: error is 0.64394
Iteration 540: error is 0.64393
Iteration 550: error is 0.64392
Iteration 560: error is 0.64391
Iteration 570: error is 0.6439
Iteration 580: error is 0.64389
Iteration 590: error is 0.64389
Iteration 600: error is 0.64388
Iteration 610: error is 0.64388
Iteration 620: error is 0.64387
Iteration 630: error is 0.64387
Iteration 640: error is 0.64387
Iteration 650: error is 0.64386
Iteration 660: error is 0.64386
Iteration 670: error is 0.64386
Iteration 680: error is 0.64386
Iteration 690: error is 0.64386

```
Iteration 700: error is 0.64385
Iteration 710: error is 0.64385
Iteration 720: error is 0.64385
Iteration 730: error is 0.64385
Iteration 740: error is 0.64385
Iteration 750: error is 0.64385
Iteration 760: error is 0.64385
Iteration 770: error is 0.64385
Iteration 780: error is 0.64385
Iteration 790: error is 0.64384
Iteration 800: error is 0.64384
Iteration 810: error is 0.64384
Iteration 820: error is 0.64384
Iteration 830: error is 0.64384
Iteration 840: error is 0.64384
Iteration 850: error is 0.64384
Iteration 860: error is 0.64384
Iteration 870: error is 0.64384
Iteration 880: error is 0.64384
Iteration 890: error is 0.64384
Iteration 900: error is 0.64384
Iteration 910: error is 0.64384
Iteration 920: error is 0.64384
Iteration 930: error is 0.64384
Iteration 940: error is 0.64384
Iteration 950: error is 0.64384
Iteration 960: error is 0.64384
Iteration 970: error is 0.64384
Iteration 980: error is 0.64384
Iteration 990: error is 0.64384
Iteration 1000: error is 0.64384
J_new = 0.8346
J_new = 0.8194
J_new = 0.8170
J_new = 0.8163
J_new = 0.8138
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.5491
Iteration 20: error is 36.7223
Iteration 30: error is 36.377
Iteration 40: error is 37.2045
Iteration 50: error is 36.8365
Iteration 60: error is 36.9473
Iteration 70: error is 37.2359
Iteration 80: error is 37.9839
Iteration 90: error is 37.7633
Iteration 100: error is 2.291
Iteration 110: error is 1.2002
Iteration 120: error is 0.77929
Iteration 130: error is 0.74257
Iteration 140: error is 0.69904
Iteration 150: error is 0.68949
Iteration 160: error is 0.68373
Iteration 170: error is 0.67904
```

Iteration 180: error is 0.67569
Iteration 190: error is 0.67304
Iteration 200: error is 0.671
Iteration 210: error is 0.6651
Iteration 220: error is 0.64505
Iteration 230: error is 0.64111
Iteration 240: error is 0.63982
Iteration 250: error is 0.63882
Iteration 260: error is 0.63717
Iteration 270: error is 0.63542
Iteration 280: error is 0.63418
Iteration 290: error is 0.63332
Iteration 300: error is 0.63263
Iteration 310: error is 0.63208
Iteration 320: error is 0.63167
Iteration 330: error is 0.63133
Iteration 340: error is 0.63105
Iteration 350: error is 0.63082
Iteration 360: error is 0.63063
Iteration 370: error is 0.63048
Iteration 380: error is 0.63034
Iteration 390: error is 0.63023
Iteration 400: error is 0.63013
Iteration 410: error is 0.63005
Iteration 420: error is 0.62998
Iteration 430: error is 0.62992
Iteration 440: error is 0.62987
Iteration 450: error is 0.62982
Iteration 460: error is 0.62978
Iteration 470: error is 0.62975
Iteration 480: error is 0.62972
Iteration 490: error is 0.62969
Iteration 500: error is 0.62967
Iteration 510: error is 0.62965
Iteration 520: error is 0.62963
Iteration 530: error is 0.62962
Iteration 540: error is 0.6296
Iteration 550: error is 0.62959
Iteration 560: error is 0.62958
Iteration 570: error is 0.62957
Iteration 580: error is 0.62956
Iteration 590: error is 0.62955
Iteration 600: error is 0.62955
Iteration 610: error is 0.62954
Iteration 620: error is 0.62954
Iteration 630: error is 0.62953
Iteration 640: error is 0.62953
Iteration 650: error is 0.62952
Iteration 660: error is 0.62952
Iteration 670: error is 0.62952
Iteration 680: error is 0.62951
Iteration 690: error is 0.62951
Iteration 700: error is 0.62951
Iteration 710: error is 0.62951
Iteration 720: error is 0.6295
Iteration 730: error is 0.6295
Iteration 740: error is 0.6295
Iteration 750: error is 0.6295
Iteration 760: error is 0.6295
Iteration 770: error is 0.6295
Iteration 780: error is 0.6295
Iteration 790: error is 0.6295
Iteration 800: error is 0.6295
Iteration 810: error is 0.6295
Iteration 820: error is 0.62949

```
Iteration 830: error is 0.62949
Iteration 840: error is 0.62949
Iteration 850: error is 0.62949
Iteration 860: error is 0.62949
Iteration 870: error is 0.62949
Iteration 880: error is 0.62949
Iteration 890: error is 0.62949
Iteration 900: error is 0.62949
Iteration 910: error is 0.62949
Iteration 920: error is 0.62949
Iteration 930: error is 0.62949
Iteration 940: error is 0.62949
Iteration 950: error is 0.62949
Iteration 960: error is 0.62949
Iteration 970: error is 0.62949
Iteration 980: error is 0.62949
Iteration 990: error is 0.62949
Iteration 1000: error is 0.62949
J_new = 0.8330
J_new = 0.8192
J_new = 0.8160
J_new = 0.8132
J_new = 0.8094
J_new = 0.8070
J_new = 0.8002
J_new = 0.7862
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.468
Iteration 20: error is 36.5733
Iteration 30: error is 36.6275
Iteration 40: error is 36.6309
Iteration 50: error is 37.139
Iteration 60: error is 37.7197
Iteration 70: error is 37.4008
Iteration 80: error is 37.693
Iteration 90: error is 37.6868
Iteration 100: error is 2.3267
Iteration 110: error is 1.2967
Iteration 120: error is 0.88828
Iteration 130: error is 0.7686
Iteration 140: error is 0.73522
Iteration 150: error is 0.68668
Iteration 160: error is 0.67896
Iteration 170: error is 0.66417
Iteration 180: error is 0.65072
Iteration 190: error is 0.64759
Iteration 200: error is 0.64557
Iteration 210: error is 0.64318
Iteration 220: error is 0.64143
Iteration 230: error is 0.64014
Iteration 240: error is 0.63908
Iteration 250: error is 0.63821
Iteration 260: error is 0.63656
Iteration 270: error is 0.63479
Iteration 280: error is 0.63351
Iteration 290: error is 0.63265
Iteration 300: error is 0.63198
Iteration 310: error is 0.63129
Iteration 320: error is 0.63089
Iteration 330: error is 0.63058
Iteration 340: error is 0.63034
```

Iteration 350: error is 0.63013
Iteration 360: error is 0.62996
Iteration 370: error is 0.62982
Iteration 380: error is 0.62971
Iteration 390: error is 0.62961
Iteration 400: error is 0.62952
Iteration 410: error is 0.62944
Iteration 420: error is 0.62937
Iteration 430: error is 0.62931
Iteration 440: error is 0.62926
Iteration 450: error is 0.62922
Iteration 460: error is 0.62918
Iteration 470: error is 0.62915
Iteration 480: error is 0.62912
Iteration 490: error is 0.62909
Iteration 500: error is 0.62907
Iteration 510: error is 0.62905
Iteration 520: error is 0.62903
Iteration 530: error is 0.62902
Iteration 540: error is 0.62901
Iteration 550: error is 0.62899
Iteration 560: error is 0.62898
Iteration 570: error is 0.62897
Iteration 580: error is 0.62896
Iteration 590: error is 0.62896
Iteration 600: error is 0.62895
Iteration 610: error is 0.62895
Iteration 620: error is 0.62894
Iteration 630: error is 0.62894
Iteration 640: error is 0.62893
Iteration 650: error is 0.62893
Iteration 660: error is 0.62892
Iteration 670: error is 0.62892
Iteration 680: error is 0.62892
Iteration 690: error is 0.62892
Iteration 700: error is 0.62891
Iteration 710: error is 0.62891
Iteration 720: error is 0.62891
Iteration 730: error is 0.62891
Iteration 740: error is 0.62891
Iteration 750: error is 0.62891
Iteration 760: error is 0.62891
Iteration 770: error is 0.6289
Iteration 780: error is 0.6289
Iteration 790: error is 0.6289
Iteration 800: error is 0.6289
Iteration 810: error is 0.6289
Iteration 820: error is 0.6289
Iteration 830: error is 0.6289
Iteration 840: error is 0.6289
Iteration 850: error is 0.6289
Iteration 860: error is 0.6289
Iteration 870: error is 0.6289
Iteration 880: error is 0.6289
Iteration 890: error is 0.6289
Iteration 900: error is 0.6289
Iteration 910: error is 0.6289
Iteration 920: error is 0.6289
Iteration 930: error is 0.6289
Iteration 940: error is 0.6289
Iteration 950: error is 0.6289
Iteration 960: error is 0.6289
Iteration 970: error is 0.6289
Iteration 980: error is 0.6289
Iteration 990: error is 0.6289

```
Iteration 1000: error is 0.6289
J_new = 0.8432
J_new = 0.8271
J_new = 0.8168
J_new = 0.8150
J_new = 0.8147
J_new = 0.8110
J_new = 0.8092
J_new = 0.8054
J_new = 0.8036
J_new = 0.7898
J_new = 0.7825
J_new = 0.7420
J_new = 0.7429
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4716
Iteration 20: error is 37.5475
Iteration 30: error is 37.2252
Iteration 40: error is 37.0895
Iteration 50: error is 37.2813
Iteration 60: error is 37.7198
Iteration 70: error is 37.4096
Iteration 80: error is 37.2074
Iteration 90: error is 37.7908
Iteration 100: error is 2.2654
Iteration 110: error is 1.1701
Iteration 120: error is 0.82575
Iteration 130: error is 0.76367
Iteration 140: error is 0.72734
Iteration 150: error is 0.67227
Iteration 160: error is 0.66384
Iteration 170: error is 0.65861
Iteration 180: error is 0.65543
Iteration 190: error is 0.65286
Iteration 200: error is 0.65102
Iteration 210: error is 0.64924
Iteration 220: error is 0.64785
Iteration 230: error is 0.64672
Iteration 240: error is 0.64571
Iteration 250: error is 0.64487
Iteration 260: error is 0.6436
Iteration 270: error is 0.64224
Iteration 280: error is 0.64118
Iteration 290: error is 0.64043
Iteration 300: error is 0.63986
Iteration 310: error is 0.63942
Iteration 320: error is 0.63908
Iteration 330: error is 0.6388
Iteration 340: error is 0.63857
Iteration 350: error is 0.63839
Iteration 360: error is 0.63823
Iteration 370: error is 0.63811
Iteration 380: error is 0.638
Iteration 390: error is 0.63791
Iteration 400: error is 0.63784
Iteration 410: error is 0.63778
Iteration 420: error is 0.63772
Iteration 430: error is 0.63767
Iteration 440: error is 0.63763
Iteration 450: error is 0.6376
Iteration 460: error is 0.63757
Iteration 470: error is 0.63754
Iteration 480: error is 0.63752
```

```
Iteration 490: error is 0.6375
Iteration 500: error is 0.63748
Iteration 510: error is 0.63747
Iteration 520: error is 0.63746
Iteration 530: error is 0.63744
Iteration 540: error is 0.63743
Iteration 550: error is 0.63743
Iteration 560: error is 0.63742
Iteration 570: error is 0.63741
Iteration 580: error is 0.63741
Iteration 590: error is 0.6374
Iteration 600: error is 0.6374
Iteration 610: error is 0.63739
Iteration 620: error is 0.63739
Iteration 630: error is 0.63738
Iteration 640: error is 0.63738
Iteration 650: error is 0.63738
Iteration 660: error is 0.63738
Iteration 670: error is 0.63737
Iteration 680: error is 0.63737
Iteration 690: error is 0.63737
Iteration 700: error is 0.63737
Iteration 710: error is 0.63737
Iteration 720: error is 0.63737
Iteration 730: error is 0.63737
Iteration 740: error is 0.63736
Iteration 750: error is 0.63736
Iteration 760: error is 0.63736
Iteration 770: error is 0.63736
Iteration 780: error is 0.63736
Iteration 790: error is 0.63736
Iteration 800: error is 0.63736
Iteration 810: error is 0.63736
Iteration 820: error is 0.63736
Iteration 830: error is 0.63736
Iteration 840: error is 0.63736
Iteration 850: error is 0.63736
Iteration 860: error is 0.63736
Iteration 870: error is 0.63736
Iteration 880: error is 0.63736
Iteration 890: error is 0.63736
Iteration 900: error is 0.63736
Iteration 910: error is 0.63736
Iteration 920: error is 0.63736
Iteration 930: error is 0.63736
Iteration 940: error is 0.63736
Iteration 950: error is 0.63736
Iteration 960: error is 0.63736
Iteration 970: error is 0.63736
Iteration 980: error is 0.63736
Iteration 990: error is 0.63736
Iteration 1000: error is 0.63736
J_new = 0.8702
J_new = 0.8399
J_new = 0.8226
J_new = 0.8120
J_new = 0.8089
J_new = 0.8069
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
```

Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2991
Iteration 20: error is 37.1203
Iteration 30: error is 37.1013
Iteration 40: error is 37.1974
Iteration 50: error is 37.2215
Iteration 60: error is 37.4209
Iteration 70: error is 37.7927
Iteration 80: error is 37.5089
Iteration 90: error is 38.1647
Iteration 100: error is 2.2923
Iteration 110: error is 1.1959
Iteration 120: error is 0.83592
Iteration 130: error is 0.69533
Iteration 140: error is 0.67517
Iteration 150: error is 0.66586
Iteration 160: error is 0.65935
Iteration 170: error is 0.65465
Iteration 180: error is 0.65104
Iteration 190: error is 0.64819
Iteration 200: error is 0.64598
Iteration 210: error is 0.64417
Iteration 220: error is 0.64266
Iteration 230: error is 0.64138
Iteration 240: error is 0.64035
Iteration 250: error is 0.63933
Iteration 260: error is 0.63781
Iteration 270: error is 0.63615
Iteration 280: error is 0.63494
Iteration 290: error is 0.63405
Iteration 300: error is 0.6334
Iteration 310: error is 0.63289
Iteration 320: error is 0.6325
Iteration 330: error is 0.63218
Iteration 340: error is 0.63193
Iteration 350: error is 0.63172
Iteration 360: error is 0.63155
Iteration 370: error is 0.63141
Iteration 380: error is 0.63129
Iteration 390: error is 0.63118
Iteration 400: error is 0.63109
Iteration 410: error is 0.63102
Iteration 420: error is 0.63096
Iteration 430: error is 0.6309
Iteration 440: error is 0.63085
Iteration 450: error is 0.63081
Iteration 460: error is 0.63077
Iteration 470: error is 0.63074
Iteration 480: error is 0.63071
Iteration 490: error is 0.63069
Iteration 500: error is 0.63066
Iteration 510: error is 0.63064
Iteration 520: error is 0.63063
Iteration 530: error is 0.63061
Iteration 540: error is 0.6306
Iteration 550: error is 0.63059
Iteration 560: error is 0.63058
Iteration 570: error is 0.63057
Iteration 580: error is 0.63056
Iteration 590: error is 0.63055
Iteration 600: error is 0.63055
Iteration 610: error is 0.63054
Iteration 620: error is 0.63054
Iteration 630: error is 0.63053

```
Iteration 640: error is 0.63053
Iteration 650: error is 0.63052
Iteration 660: error is 0.63052
Iteration 670: error is 0.63052
Iteration 680: error is 0.63051
Iteration 690: error is 0.63051
Iteration 700: error is 0.63051
Iteration 710: error is 0.63051
Iteration 720: error is 0.6305
Iteration 730: error is 0.6305
Iteration 740: error is 0.6305
Iteration 750: error is 0.6305
Iteration 760: error is 0.6305
Iteration 770: error is 0.6305
Iteration 780: error is 0.6305
Iteration 790: error is 0.6305
Iteration 800: error is 0.6305
Iteration 810: error is 0.63049
Iteration 820: error is 0.63049
Iteration 830: error is 0.63049
Iteration 840: error is 0.63049
Iteration 850: error is 0.63049
Iteration 860: error is 0.63049
Iteration 870: error is 0.63049
Iteration 880: error is 0.63049
Iteration 890: error is 0.63049
Iteration 900: error is 0.63049
Iteration 910: error is 0.63049
Iteration 920: error is 0.63049
Iteration 930: error is 0.63049
Iteration 940: error is 0.63049
Iteration 950: error is 0.63049
Iteration 960: error is 0.63049
Iteration 970: error is 0.63049
Iteration 980: error is 0.63049
Iteration 990: error is 0.63049
Iteration 1000: error is 0.63049
J_new = 0.8436
J_new = 0.8272
J_new = 0.8162
J_new = 0.8142
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6382
Iteration 20: error is 37.3697
Iteration 30: error is 37.2706
Iteration 40: error is 36.9556
Iteration 50: error is 36.8232
Iteration 60: error is 37.196
Iteration 70: error is 37.5471
Iteration 80: error is 37.6108
Iteration 90: error is 37.8502
Iteration 100: error is 2.1841
Iteration 110: error is 1.3034
Iteration 120: error is 1.048
```

Iteration 130: error is 0.91348
Iteration 140: error is 0.84397
Iteration 150: error is 0.79837
Iteration 160: error is 0.78127
Iteration 170: error is 0.76307
Iteration 180: error is 0.66936
Iteration 190: error is 0.65151
Iteration 200: error is 0.69172
Iteration 210: error is 0.65002
Iteration 220: error is 0.64209
Iteration 230: error is 0.6379
Iteration 240: error is 0.63711
Iteration 250: error is 0.63642
Iteration 260: error is 0.63532
Iteration 270: error is 0.63409
Iteration 280: error is 0.63322
Iteration 290: error is 0.63259
Iteration 300: error is 0.63208
Iteration 310: error is 0.63168
Iteration 320: error is 0.63137
Iteration 330: error is 0.63112
Iteration 340: error is 0.63092
Iteration 350: error is 0.63074
Iteration 360: error is 0.6306
Iteration 370: error is 0.63048
Iteration 380: error is 0.63038
Iteration 390: error is 0.63029
Iteration 400: error is 0.63022
Iteration 410: error is 0.63016
Iteration 420: error is 0.63011
Iteration 430: error is 0.63006
Iteration 440: error is 0.63002
Iteration 450: error is 0.62998
Iteration 460: error is 0.62995
Iteration 470: error is 0.62993
Iteration 480: error is 0.62991
Iteration 490: error is 0.62989
Iteration 500: error is 0.62987
Iteration 510: error is 0.62985
Iteration 520: error is 0.62984
Iteration 530: error is 0.62983
Iteration 540: error is 0.62982
Iteration 550: error is 0.62981
Iteration 560: error is 0.6298
Iteration 570: error is 0.62979
Iteration 580: error is 0.62979
Iteration 590: error is 0.62978
Iteration 600: error is 0.62978
Iteration 610: error is 0.62977
Iteration 620: error is 0.62977
Iteration 630: error is 0.62977
Iteration 640: error is 0.62976
Iteration 650: error is 0.62976
Iteration 660: error is 0.62976
Iteration 670: error is 0.62975
Iteration 680: error is 0.62975
Iteration 690: error is 0.62975
Iteration 700: error is 0.62975
Iteration 710: error is 0.62975
Iteration 720: error is 0.62975
Iteration 730: error is 0.62975
Iteration 740: error is 0.62975
Iteration 750: error is 0.62974
Iteration 760: error is 0.62974
Iteration 770: error is 0.62974

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Iteration 780: error is 0.62974
Iteration 790: error is 0.62974
Iteration 800: error is 0.62974
Iteration 810: error is 0.62974
Iteration 820: error is 0.62974
Iteration 830: error is 0.62974
Iteration 840: error is 0.62974
Iteration 850: error is 0.62974
Iteration 860: error is 0.62974
Iteration 870: error is 0.62974
Iteration 880: error is 0.62974
Iteration 890: error is 0.62974
Iteration 900: error is 0.62974
Iteration 910: error is 0.62974
Iteration 920: error is 0.62974
Iteration 930: error is 0.62974
Iteration 940: error is 0.62974
Iteration 950: error is 0.62974
Iteration 960: error is 0.62974
Iteration 970: error is 0.62974
Iteration 980: error is 0.62974
Iteration 990: error is 0.62974
Iteration 1000: error is 0.62974
J_new = 0.8436
J_new = 0.8277
J_new = 0.8168
J_new = 0.8146
J_new = 0.8122
J_new = 0.8078
J_new = 0.8063
J_new = 0.8017
J_new = 0.7865
J_new = 0.7423
J_new = 0.7430
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9742
Iteration 20: error is 37.7682
Iteration 30: error is 36.9064
Iteration 40: error is 37.1332
Iteration 50: error is 37.4659
Iteration 60: error is 36.9861
Iteration 70: error is 37.2404
Iteration 80: error is 37.2745
Iteration 90: error is 36.7446
Iteration 100: error is 2.0949
Iteration 110: error is 1.2554
Iteration 120: error is 0.92465
Iteration 130: error is 0.79797
Iteration 140: error is 0.73271
Iteration 150: error is 0.67021
Iteration 160: error is 0.65857
Iteration 170: error is 0.65287
Iteration 180: error is 0.64944
Iteration 190: error is 0.64682
Iteration 200: error is 0.64429
Iteration 210: error is 0.64251
Iteration 220: error is 0.64107
Iteration 230: error is 0.63983
Iteration 240: error is 0.63877
Iteration 250: error is 0.63789
Iteration 260: error is 0.63647
Iteration 270: error is 0.63495
Iteration 280: error is 0.63377
```

Iteration 290: error is 0.63289
Iteration 300: error is 0.63225
Iteration 310: error is 0.63173
Iteration 320: error is 0.63134
Iteration 330: error is 0.63102
Iteration 340: error is 0.63076
Iteration 350: error is 0.63055
Iteration 360: error is 0.63037
Iteration 370: error is 0.63022
Iteration 380: error is 0.63009
Iteration 390: error is 0.62998
Iteration 400: error is 0.62989
Iteration 410: error is 0.62981
Iteration 420: error is 0.62974
Iteration 430: error is 0.62968
Iteration 440: error is 0.62963
Iteration 450: error is 0.62958
Iteration 460: error is 0.62954
Iteration 470: error is 0.62951
Iteration 480: error is 0.62948
Iteration 490: error is 0.62945
Iteration 500: error is 0.62943
Iteration 510: error is 0.62941
Iteration 520: error is 0.62939
Iteration 530: error is 0.62937
Iteration 540: error is 0.62936
Iteration 550: error is 0.62935
Iteration 560: error is 0.62934
Iteration 570: error is 0.62933
Iteration 580: error is 0.62932
Iteration 590: error is 0.62931
Iteration 600: error is 0.6293
Iteration 610: error is 0.6293
Iteration 620: error is 0.62929
Iteration 630: error is 0.62928
Iteration 640: error is 0.62928
Iteration 650: error is 0.62928
Iteration 660: error is 0.62927
Iteration 670: error is 0.62927
Iteration 680: error is 0.62927
Iteration 690: error is 0.62926
Iteration 700: error is 0.62926
Iteration 710: error is 0.62926
Iteration 720: error is 0.62926
Iteration 730: error is 0.62925
Iteration 740: error is 0.62925
Iteration 750: error is 0.62925
Iteration 760: error is 0.62925
Iteration 770: error is 0.62925
Iteration 780: error is 0.62925
Iteration 790: error is 0.62925
Iteration 800: error is 0.62925
Iteration 810: error is 0.62925
Iteration 820: error is 0.62925
Iteration 830: error is 0.62924
Iteration 840: error is 0.62924
Iteration 850: error is 0.62924
Iteration 860: error is 0.62924
Iteration 870: error is 0.62924
Iteration 880: error is 0.62924
Iteration 890: error is 0.62924
Iteration 900: error is 0.62924
Iteration 910: error is 0.62924
Iteration 920: error is 0.62924
Iteration 930: error is 0.62924

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Iteration 940: error is 0.62924
Iteration 950: error is 0.62924
Iteration 960: error is 0.62924
Iteration 970: error is 0.62924
Iteration 980: error is 0.62924
Iteration 990: error is 0.62924
Iteration 1000: error is 0.62924
J_new = 0.8421
J_new = 0.8272
J_new = 0.8176
J_new = 0.8158
J_new = 0.8149
J_new = 0.8109
J_new = 0.8073
J_new = 0.8025
J_new = 0.7908
J_new = 0.7814
J_new = 0.7432
J_new = 0.7419
J_new = 0.7427
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.242
Iteration 20: error is 36.8829
Iteration 30: error is 36.5191
Iteration 40: error is 36.8548
Iteration 50: error is 37.0783
Iteration 60: error is 36.6617
Iteration 70: error is 37.423
Iteration 80: error is 37.3621
Iteration 90: error is 37.7964
Iteration 100: error is 2.2733
Iteration 110: error is 1.3413
Iteration 120: error is 0.86359
Iteration 130: error is 0.72777
Iteration 140: error is 0.69106
Iteration 150: error is 0.67547
Iteration 160: error is 0.667
Iteration 170: error is 0.66202
Iteration 180: error is 0.65833
Iteration 190: error is 0.65562
Iteration 200: error is 0.65336
Iteration 210: error is 0.65152
Iteration 220: error is 0.65007
Iteration 230: error is 0.64883
Iteration 240: error is 0.64777
Iteration 250: error is 0.64688
Iteration 260: error is 0.64549
Iteration 270: error is 0.64397
Iteration 280: error is 0.64283
Iteration 290: error is 0.64201
Iteration 300: error is 0.64139
Iteration 310: error is 0.64093
Iteration 320: error is 0.64056
Iteration 330: error is 0.64026
Iteration 340: error is 0.64002
Iteration 350: error is 0.63982
Iteration 360: error is 0.63966
Iteration 370: error is 0.63953
Iteration 380: error is 0.63942
Iteration 390: error is 0.63934
Iteration 400: error is 0.63926
Iteration 410: error is 0.63919
Iteration 420: error is 0.63913
```

```
Iteration 430: error is 0.63908
Iteration 440: error is 0.63904
Iteration 450: error is 0.639
Iteration 460: error is 0.63897
Iteration 470: error is 0.63894
Iteration 480: error is 0.63892
Iteration 490: error is 0.6389
Iteration 500: error is 0.63888
Iteration 510: error is 0.63886
Iteration 520: error is 0.63885
Iteration 530: error is 0.63884
Iteration 540: error is 0.63883
Iteration 550: error is 0.63882
Iteration 560: error is 0.63881
Iteration 570: error is 0.6388
Iteration 580: error is 0.63879
Iteration 590: error is 0.63879
Iteration 600: error is 0.63878
Iteration 610: error is 0.63878
Iteration 620: error is 0.63877
Iteration 630: error is 0.63877
Iteration 640: error is 0.63877
Iteration 650: error is 0.63877
Iteration 660: error is 0.63876
Iteration 670: error is 0.63876
Iteration 680: error is 0.63876
Iteration 690: error is 0.63876
Iteration 700: error is 0.63876
Iteration 710: error is 0.63875
Iteration 720: error is 0.63875
Iteration 730: error is 0.63875
Iteration 740: error is 0.63875
Iteration 750: error is 0.63875
Iteration 760: error is 0.63875
Iteration 770: error is 0.63875
Iteration 780: error is 0.63875
Iteration 790: error is 0.63875
Iteration 800: error is 0.63875
Iteration 810: error is 0.63875
Iteration 820: error is 0.63875
Iteration 830: error is 0.63875
Iteration 840: error is 0.63874
Iteration 850: error is 0.63874
Iteration 860: error is 0.63874
Iteration 870: error is 0.63874
Iteration 880: error is 0.63874
Iteration 890: error is 0.63874
Iteration 900: error is 0.63874
Iteration 910: error is 0.63874
Iteration 920: error is 0.63874
Iteration 930: error is 0.63874
Iteration 940: error is 0.63874
Iteration 950: error is 0.63874
Iteration 960: error is 0.63874
Iteration 970: error is 0.63874
Iteration 980: error is 0.63874
Iteration 990: error is 0.63874
Iteration 1000: error is 0.63874
J_new = 0.8432
J_new = 0.8273
J_new = 0.8156
J_new = 0.8139
J_new = 0.8116
J_new = 0.8079
J_new = 0.8061
```

```
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0098
Iteration 20: error is 36.9166
Iteration 30: error is 36.2842
Iteration 40: error is 36.6869
Iteration 50: error is 36.8262
Iteration 60: error is 36.4854
Iteration 70: error is 36.9662
Iteration 80: error is 36.964
Iteration 90: error is 37.4471
Iteration 100: error is 2.174
Iteration 110: error is 1.1679
Iteration 120: error is 0.85321
Iteration 130: error is 0.78704
Iteration 140: error is 0.72792
Iteration 150: error is 0.69405
Iteration 160: error is 0.6525
Iteration 170: error is 0.64774
Iteration 180: error is 0.64385
Iteration 190: error is 0.64146
Iteration 200: error is 0.63927
Iteration 210: error is 0.63765
Iteration 220: error is 0.63628
Iteration 230: error is 0.63603
Iteration 240: error is 0.63415
Iteration 250: error is 0.63331
Iteration 260: error is 0.63198
Iteration 270: error is 0.63054
Iteration 280: error is 0.62948
Iteration 290: error is 0.62871
Iteration 300: error is 0.62809
Iteration 310: error is 0.62762
Iteration 320: error is 0.62726
Iteration 330: error is 0.62698
Iteration 340: error is 0.62674
Iteration 350: error is 0.62655
Iteration 360: error is 0.6264
Iteration 370: error is 0.62627
Iteration 380: error is 0.62615
Iteration 390: error is 0.62606
Iteration 400: error is 0.62598
Iteration 410: error is 0.62591
Iteration 420: error is 0.62585
Iteration 430: error is 0.62581
Iteration 440: error is 0.62576
Iteration 450: error is 0.62573
Iteration 460: error is 0.6257
Iteration 470: error is 0.62567
Iteration 480: error is 0.62565
Iteration 490: error is 0.62562
Iteration 500: error is 0.62561
Iteration 510: error is 0.62559
Iteration 520: error is 0.62558
Iteration 530: error is 0.62557
Iteration 540: error is 0.62556
Iteration 550: error is 0.62555
Iteration 560: error is 0.62554
```

```
Iteration 570: error is 0.62553
Iteration 580: error is 0.62552
Iteration 590: error is 0.62552
Iteration 600: error is 0.62551
Iteration 610: error is 0.62551
Iteration 620: error is 0.6255
Iteration 630: error is 0.6255
Iteration 640: error is 0.6255
Iteration 650: error is 0.62549
Iteration 660: error is 0.62549
Iteration 670: error is 0.62549
Iteration 680: error is 0.62549
Iteration 690: error is 0.62548
Iteration 700: error is 0.62548
Iteration 710: error is 0.62548
Iteration 720: error is 0.62548
Iteration 730: error is 0.62548
Iteration 740: error is 0.62548
Iteration 750: error is 0.62548
Iteration 760: error is 0.62548
Iteration 770: error is 0.62548
Iteration 780: error is 0.62548
Iteration 790: error is 0.62547
Iteration 800: error is 0.62547
Iteration 810: error is 0.62547
Iteration 820: error is 0.62547
Iteration 830: error is 0.62547
Iteration 840: error is 0.62547
Iteration 850: error is 0.62547
Iteration 860: error is 0.62547
Iteration 870: error is 0.62547
Iteration 880: error is 0.62547
Iteration 890: error is 0.62547
Iteration 900: error is 0.62547
Iteration 910: error is 0.62547
Iteration 920: error is 0.62547
Iteration 930: error is 0.62547
Iteration 940: error is 0.62547
Iteration 950: error is 0.62547
Iteration 960: error is 0.62547
Iteration 970: error is 0.62547
Iteration 980: error is 0.62547
Iteration 990: error is 0.62547
Iteration 1000: error is 0.62547
J_new = 0.7952
J_new = 0.7699
J_new = 0.7534
J_new = 0.7452
J_new = 0.7444
J_new = 0.7453
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.5609
Iteration 20: error is 36.9347
Iteration 30: error is 37.1237
Iteration 40: error is 37.0609
Iteration 50: error is 37.1862
Iteration 60: error is 37.8754
Iteration 70: error is 37.4045
Iteration 80: error is 37.403
Iteration 90: error is 37.5149
Iteration 100: error is 2.0525
Iteration 110: error is 1.1433
Iteration 120: error is 0.84358
```

Iteration 130: error is 0.70588
Iteration 140: error is 0.67803
Iteration 150: error is 0.6685
Iteration 160: error is 0.66145
Iteration 170: error is 0.65636
Iteration 180: error is 0.65263
Iteration 190: error is 0.64974
Iteration 200: error is 0.64748
Iteration 210: error is 0.64566
Iteration 220: error is 0.64409
Iteration 230: error is 0.64285
Iteration 240: error is 0.64169
Iteration 250: error is 0.64074
Iteration 260: error is 0.63925
Iteration 270: error is 0.63764
Iteration 280: error is 0.63644
Iteration 290: error is 0.63555
Iteration 300: error is 0.63488
Iteration 310: error is 0.63439
Iteration 320: error is 0.63399
Iteration 330: error is 0.63368
Iteration 340: error is 0.63343
Iteration 350: error is 0.63322
Iteration 360: error is 0.63305
Iteration 370: error is 0.63291
Iteration 380: error is 0.63279
Iteration 390: error is 0.63269
Iteration 400: error is 0.6326
Iteration 410: error is 0.63253
Iteration 420: error is 0.63247
Iteration 430: error is 0.63241
Iteration 440: error is 0.63237
Iteration 450: error is 0.63233
Iteration 460: error is 0.63229
Iteration 470: error is 0.63226
Iteration 480: error is 0.63223
Iteration 490: error is 0.63221
Iteration 500: error is 0.63219
Iteration 510: error is 0.63217
Iteration 520: error is 0.63215
Iteration 530: error is 0.63214
Iteration 540: error is 0.63213
Iteration 550: error is 0.63211
Iteration 560: error is 0.6321
Iteration 570: error is 0.6321
Iteration 580: error is 0.63209
Iteration 590: error is 0.63208
Iteration 600: error is 0.63208
Iteration 610: error is 0.63207
Iteration 620: error is 0.63206
Iteration 630: error is 0.63206
Iteration 640: error is 0.63206
Iteration 650: error is 0.63205
Iteration 660: error is 0.63205
Iteration 670: error is 0.63205
Iteration 680: error is 0.63204
Iteration 690: error is 0.63204
Iteration 700: error is 0.63204
Iteration 710: error is 0.63204
Iteration 720: error is 0.63204
Iteration 730: error is 0.63203
Iteration 740: error is 0.63203
Iteration 750: error is 0.63203
Iteration 760: error is 0.63203
Iteration 770: error is 0.63203

```
Iteration 780: error is 0.63203
Iteration 790: error is 0.63203
Iteration 800: error is 0.63203
Iteration 810: error is 0.63203
Iteration 820: error is 0.63203
Iteration 830: error is 0.63203
Iteration 840: error is 0.63203
Iteration 850: error is 0.63203
Iteration 860: error is 0.63202
Iteration 870: error is 0.63202
Iteration 880: error is 0.63202
Iteration 890: error is 0.63202
Iteration 900: error is 0.63202
Iteration 910: error is 0.63202
Iteration 920: error is 0.63202
Iteration 930: error is 0.63202
Iteration 940: error is 0.63202
Iteration 950: error is 0.63202
Iteration 960: error is 0.63202
Iteration 970: error is 0.63202
Iteration 980: error is 0.63202
Iteration 990: error is 0.63202
Iteration 1000: error is 0.63202
J_new = 0.8427
J_new = 0.8270
J_new = 0.8166
J_new = 0.8150
J_new = 0.8145
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8032
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.6269
Iteration 20: error is 37.5425
Iteration 30: error is 37.0587
Iteration 40: error is 36.8077
Iteration 50: error is 37.3071
Iteration 60: error is 37.2803
Iteration 70: error is 37.5208
Iteration 80: error is 37.6743
Iteration 90: error is 38.1767
Iteration 100: error is 2.3163
Iteration 110: error is 1.4627
Iteration 120: error is 0.97588
Iteration 130: error is 0.78315
Iteration 140: error is 0.74273
Iteration 150: error is 0.70787
Iteration 160: error is 0.70223
Iteration 170: error is 0.69793
Iteration 180: error is 0.6951
Iteration 190: error is 0.69293
Iteration 200: error is 0.69093
Iteration 210: error is 0.66445
Iteration 220: error is 0.66187
Iteration 230: error is 0.65914
Iteration 240: error is 0.658
Iteration 250: error is 0.65701
Iteration 260: error is 0.65545
```

Iteration 270: error is 0.65372
Iteration 280: error is 0.65246
Iteration 290: error is 0.65154
Iteration 300: error is 0.65086
Iteration 310: error is 0.65032
Iteration 320: error is 0.64991
Iteration 330: error is 0.64958
Iteration 340: error is 0.64931
Iteration 350: error is 0.64909
Iteration 360: error is 0.64891
Iteration 370: error is 0.64876
Iteration 380: error is 0.64863
Iteration 390: error is 0.64852
Iteration 400: error is 0.64843
Iteration 410: error is 0.64835
Iteration 420: error is 0.64828
Iteration 430: error is 0.64822
Iteration 440: error is 0.64817
Iteration 450: error is 0.64813
Iteration 460: error is 0.64809
Iteration 470: error is 0.64806
Iteration 480: error is 0.64803
Iteration 490: error is 0.64801
Iteration 500: error is 0.64798
Iteration 510: error is 0.64796
Iteration 520: error is 0.64794
Iteration 530: error is 0.64793
Iteration 540: error is 0.64791
Iteration 550: error is 0.6479
Iteration 560: error is 0.64789
Iteration 570: error is 0.64788
Iteration 580: error is 0.64787
Iteration 590: error is 0.64786
Iteration 600: error is 0.64785
Iteration 610: error is 0.64785
Iteration 620: error is 0.64784
Iteration 630: error is 0.64784
Iteration 640: error is 0.64783
Iteration 650: error is 0.64783
Iteration 660: error is 0.64782
Iteration 670: error is 0.64782
Iteration 680: error is 0.64782
Iteration 690: error is 0.64781
Iteration 700: error is 0.64781
Iteration 710: error is 0.64781
Iteration 720: error is 0.64781
Iteration 730: error is 0.6478
Iteration 740: error is 0.6478
Iteration 750: error is 0.6478
Iteration 760: error is 0.6478
Iteration 770: error is 0.6478
Iteration 780: error is 0.6478
Iteration 790: error is 0.64779
Iteration 800: error is 0.64779
Iteration 810: error is 0.64779
Iteration 820: error is 0.64779
Iteration 830: error is 0.64779
Iteration 840: error is 0.64779
Iteration 850: error is 0.64779
Iteration 860: error is 0.64779
Iteration 870: error is 0.64779
Iteration 880: error is 0.64779
Iteration 890: error is 0.64779
Iteration 900: error is 0.64779
Iteration 910: error is 0.64779

```
Iteration 920: error is 0.64779
Iteration 930: error is 0.64779
Iteration 940: error is 0.64779
Iteration 950: error is 0.64779
Iteration 960: error is 0.64779
Iteration 970: error is 0.64778
Iteration 980: error is 0.64778
Iteration 990: error is 0.64778
Iteration 1000: error is 0.64778
J_new = 0.8372
J_new = 0.8218
J_new = 0.8199
J_new = 0.8196
J_new = 0.8170
J_new = 0.8168
J_new = 0.8129
J_new = 0.8112
J_new = 0.8073
J_new = 0.8052
J_new = 0.7873
J_new = 0.7453
J_new = 0.7438
J_new = 0.7446
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.1877
Iteration 20: error is 37.94
Iteration 30: error is 37.0553
Iteration 40: error is 37.3987
Iteration 50: error is 36.9742
Iteration 60: error is 37.2785
Iteration 70: error is 37.2044
Iteration 80: error is 38.1324
Iteration 90: error is 37.8607
Iteration 100: error is 2.4454
Iteration 110: error is 1.2558
Iteration 120: error is 0.90054
Iteration 130: error is 0.78924
Iteration 140: error is 0.74239
Iteration 150: error is 0.6883
Iteration 160: error is 0.67621
Iteration 170: error is 0.66334
Iteration 180: error is 0.65965
Iteration 190: error is 0.65739
Iteration 200: error is 0.65521
Iteration 210: error is 0.65349
Iteration 220: error is 0.65212
Iteration 230: error is 0.65087
Iteration 240: error is 0.64991
Iteration 250: error is 0.64911
Iteration 260: error is 0.6477
Iteration 270: error is 0.6463
Iteration 280: error is 0.64519
Iteration 290: error is 0.64434
Iteration 300: error is 0.64372
Iteration 310: error is 0.64324
Iteration 320: error is 0.64285
Iteration 330: error is 0.64254
Iteration 340: error is 0.64229
Iteration 350: error is 0.64208
Iteration 360: error is 0.64191
Iteration 370: error is 0.64177
Iteration 380: error is 0.64165
Iteration 390: error is 0.64155
```

```
Iteration 400: error is 0.64146
Iteration 410: error is 0.64138
Iteration 420: error is 0.64132
Iteration 430: error is 0.64127
Iteration 440: error is 0.64123
Iteration 450: error is 0.64118
Iteration 460: error is 0.64115
Iteration 470: error is 0.64112
Iteration 480: error is 0.64109
Iteration 490: error is 0.64107
Iteration 500: error is 0.64105
Iteration 510: error is 0.64103
Iteration 520: error is 0.64101
Iteration 530: error is 0.641
Iteration 540: error is 0.64098
Iteration 550: error is 0.64097
Iteration 560: error is 0.64096
Iteration 570: error is 0.64096
Iteration 580: error is 0.64095
Iteration 590: error is 0.64094
Iteration 600: error is 0.64093
Iteration 610: error is 0.64093
Iteration 620: error is 0.64093
Iteration 630: error is 0.64092
Iteration 640: error is 0.64092
Iteration 650: error is 0.64091
Iteration 660: error is 0.64091
Iteration 670: error is 0.64091
Iteration 680: error is 0.64091
Iteration 690: error is 0.6409
Iteration 700: error is 0.6409
Iteration 710: error is 0.6409
Iteration 720: error is 0.6409
Iteration 730: error is 0.6409
Iteration 740: error is 0.6409
Iteration 750: error is 0.6409
Iteration 760: error is 0.64089
Iteration 770: error is 0.64089
Iteration 780: error is 0.64089
Iteration 790: error is 0.64089
Iteration 800: error is 0.64089
Iteration 810: error is 0.64089
Iteration 820: error is 0.64089
Iteration 830: error is 0.64089
Iteration 840: error is 0.64089
Iteration 850: error is 0.64089
Iteration 860: error is 0.64089
Iteration 870: error is 0.64089
Iteration 880: error is 0.64089
Iteration 890: error is 0.64089
Iteration 900: error is 0.64089
Iteration 910: error is 0.64089
Iteration 920: error is 0.64089
Iteration 930: error is 0.64089
Iteration 940: error is 0.64089
Iteration 950: error is 0.64089
Iteration 960: error is 0.64089
Iteration 970: error is 0.64089
Iteration 980: error is 0.64089
Iteration 990: error is 0.64089
Iteration 1000: error is 0.64089
J_new = 0.8416
J_new = 0.8264
J_new = 0.8142
J_new = 0.8112
```

```
J_new = 0.8098
J_new = 0.8054
J_new = 0.8006
J_new = 0.7851
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2662
Iteration 20: error is 36.9309
Iteration 30: error is 36.474
Iteration 40: error is 36.4562
Iteration 50: error is 36.678
Iteration 60: error is 36.9119
Iteration 70: error is 37.3551
Iteration 80: error is 37.3717
Iteration 90: error is 37.6916
Iteration 100: error is 2.3331
Iteration 110: error is 1.421
Iteration 120: error is 0.96839
Iteration 130: error is 0.76504
Iteration 140: error is 0.6722
Iteration 150: error is 0.66768
Iteration 160: error is 0.65886
Iteration 170: error is 0.65442
Iteration 180: error is 0.65143
Iteration 190: error is 0.64927
Iteration 200: error is 0.64704
Iteration 210: error is 0.64549
Iteration 220: error is 0.64417
Iteration 230: error is 0.64299
Iteration 240: error is 0.64205
Iteration 250: error is 0.6412
Iteration 260: error is 0.63991
Iteration 270: error is 0.6384
Iteration 280: error is 0.63737
Iteration 290: error is 0.63664
Iteration 300: error is 0.63608
Iteration 310: error is 0.63562
Iteration 320: error is 0.63527
Iteration 330: error is 0.63498
Iteration 340: error is 0.63475
Iteration 350: error is 0.63455
Iteration 360: error is 0.63439
Iteration 370: error is 0.63426
Iteration 380: error is 0.63414
Iteration 390: error is 0.63404
Iteration 400: error is 0.63397
Iteration 410: error is 0.6339
Iteration 420: error is 0.63384
Iteration 430: error is 0.63379
Iteration 440: error is 0.63374
Iteration 450: error is 0.6337
Iteration 460: error is 0.63367
Iteration 470: error is 0.63364
Iteration 480: error is 0.63362
Iteration 490: error is 0.63359
Iteration 500: error is 0.63357
Iteration 510: error is 0.63356
Iteration 520: error is 0.63354
Iteration 530: error is 0.63353
Iteration 540: error is 0.63352
Iteration 550: error is 0.63351
```

```
Iteration 560: error is 0.6335
Iteration 570: error is 0.63349
Iteration 580: error is 0.63349
Iteration 590: error is 0.63348
Iteration 600: error is 0.63347
Iteration 610: error is 0.63347
Iteration 620: error is 0.63347
Iteration 630: error is 0.63346
Iteration 640: error is 0.63346
Iteration 650: error is 0.63345
Iteration 660: error is 0.63345
Iteration 670: error is 0.63345
Iteration 680: error is 0.63345
Iteration 690: error is 0.63345
Iteration 700: error is 0.63344
Iteration 710: error is 0.63344
Iteration 720: error is 0.63344
Iteration 730: error is 0.63344
Iteration 740: error is 0.63344
Iteration 750: error is 0.63344
Iteration 760: error is 0.63344
Iteration 770: error is 0.63344
Iteration 780: error is 0.63344
Iteration 790: error is 0.63343
Iteration 800: error is 0.63343
Iteration 810: error is 0.63343
Iteration 820: error is 0.63343
Iteration 830: error is 0.63343
Iteration 840: error is 0.63343
Iteration 850: error is 0.63343
Iteration 860: error is 0.63343
Iteration 870: error is 0.63343
Iteration 880: error is 0.63343
Iteration 890: error is 0.63343
Iteration 900: error is 0.63343
Iteration 910: error is 0.63343
Iteration 920: error is 0.63343
Iteration 930: error is 0.63343
Iteration 940: error is 0.63343
Iteration 950: error is 0.63343
Iteration 960: error is 0.63343
Iteration 970: error is 0.63343
Iteration 980: error is 0.63343
Iteration 990: error is 0.63343
Iteration 1000: error is 0.63343
J_new = 0.8400
J_new = 0.8266
J_new = 0.8145
J_new = 0.8116
J_new = 0.8100
J_new = 0.8058
J_new = 0.8009
J_new = 0.7855
J_new = 0.7434
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.9468
Iteration 20: error is 37.4541
Iteration 30: error is 37.301
Iteration 40: error is 37.1213
Iteration 50: error is 37.0785
Iteration 60: error is 37.2981
```

Iteration 70: error is 37.1567
Iteration 80: error is 37.2489
Iteration 90: error is 37.2374
Iteration 100: error is 2.179
Iteration 110: error is 1.3166
Iteration 120: error is 0.94782
Iteration 130: error is 0.80785
Iteration 140: error is 0.70006
Iteration 150: error is 0.6674
Iteration 160: error is 0.66021
Iteration 170: error is 0.65551
Iteration 180: error is 0.65192
Iteration 190: error is 0.64902
Iteration 200: error is 0.64671
Iteration 210: error is 0.64493
Iteration 220: error is 0.64344
Iteration 230: error is 0.64216
Iteration 240: error is 0.64114
Iteration 250: error is 0.64018
Iteration 260: error is 0.63877
Iteration 270: error is 0.6372
Iteration 280: error is 0.63605
Iteration 290: error is 0.63517
Iteration 300: error is 0.63451
Iteration 310: error is 0.63399
Iteration 320: error is 0.63359
Iteration 330: error is 0.63327
Iteration 340: error is 0.63301
Iteration 350: error is 0.6328
Iteration 360: error is 0.63263
Iteration 370: error is 0.63247
Iteration 380: error is 0.63231
Iteration 390: error is 0.63214
Iteration 400: error is 0.632
Iteration 410: error is 0.63188
Iteration 420: error is 0.63157
Iteration 430: error is 0.63143
Iteration 440: error is 0.63137
Iteration 450: error is 0.63133
Iteration 460: error is 0.6313
Iteration 470: error is 0.63126
Iteration 480: error is 0.63123
Iteration 490: error is 0.6312
Iteration 500: error is 0.63117
Iteration 510: error is 0.63115
Iteration 520: error is 0.63113
Iteration 530: error is 0.63112
Iteration 540: error is 0.6311
Iteration 550: error is 0.63109
Iteration 560: error is 0.63107
Iteration 570: error is 0.63106
Iteration 580: error is 0.63105
Iteration 590: error is 0.63105
Iteration 600: error is 0.63104
Iteration 610: error is 0.63103
Iteration 620: error is 0.63103
Iteration 630: error is 0.63102
Iteration 640: error is 0.63102
Iteration 650: error is 0.63101
Iteration 660: error is 0.63101
Iteration 670: error is 0.63101
Iteration 680: error is 0.631
Iteration 690: error is 0.631
Iteration 700: error is 0.631
Iteration 710: error is 0.631

```
Iteration 720: error is 0.63099
Iteration 730: error is 0.63099
Iteration 740: error is 0.63099
Iteration 750: error is 0.63099
Iteration 760: error is 0.63099
Iteration 770: error is 0.63099
Iteration 780: error is 0.63099
Iteration 790: error is 0.63098
Iteration 800: error is 0.63098
Iteration 810: error is 0.63098
Iteration 820: error is 0.63098
Iteration 830: error is 0.63098
Iteration 840: error is 0.63098
Iteration 850: error is 0.63098
Iteration 860: error is 0.63098
Iteration 870: error is 0.63098
Iteration 880: error is 0.63098
Iteration 890: error is 0.63098
Iteration 900: error is 0.63098
Iteration 910: error is 0.63098
Iteration 920: error is 0.63098
Iteration 930: error is 0.63098
Iteration 940: error is 0.63098
Iteration 950: error is 0.63098
Iteration 960: error is 0.63098
Iteration 970: error is 0.63098
Iteration 980: error is 0.63098
Iteration 990: error is 0.63098
Iteration 1000: error is 0.63098
J_new = 0.8453
J_new = 0.8276
J_new = 0.8166
J_new = 0.8150
J_new = 0.8145
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.3836
Iteration 20: error is 36.5764
Iteration 30: error is 36.831
Iteration 40: error is 36.7648
Iteration 50: error is 37.2873
Iteration 60: error is 37.924
Iteration 70: error is 37.6533
Iteration 80: error is 37.4724
Iteration 90: error is 37.0884
Iteration 100: error is 2.3804
Iteration 110: error is 1.2718
Iteration 120: error is 0.85735
Iteration 130: error is 0.73665
Iteration 140: error is 0.71399
Iteration 150: error is 0.70383
Iteration 160: error is 0.69831
Iteration 170: error is 0.69348
Iteration 180: error is 0.69016
Iteration 190: error is 0.68683
Iteration 200: error is 0.65812
```

Iteration 210: error is 0.64927
Iteration 220: error is 0.64787
Iteration 230: error is 0.64663
Iteration 240: error is 0.64558
Iteration 250: error is 0.6447
Iteration 260: error is 0.64331
Iteration 270: error is 0.64188
Iteration 280: error is 0.6408
Iteration 290: error is 0.64004
Iteration 300: error is 0.63943
Iteration 310: error is 0.63898
Iteration 320: error is 0.63861
Iteration 330: error is 0.63831
Iteration 340: error is 0.63807
Iteration 350: error is 0.63787
Iteration 360: error is 0.63771
Iteration 370: error is 0.63758
Iteration 380: error is 0.63747
Iteration 390: error is 0.63737
Iteration 400: error is 0.63729
Iteration 410: error is 0.63723
Iteration 420: error is 0.63717
Iteration 430: error is 0.63712
Iteration 440: error is 0.63708
Iteration 450: error is 0.63704
Iteration 460: error is 0.63701
Iteration 470: error is 0.63699
Iteration 480: error is 0.63696
Iteration 490: error is 0.63694
Iteration 500: error is 0.63693
Iteration 510: error is 0.63691
Iteration 520: error is 0.6369
Iteration 530: error is 0.63688
Iteration 540: error is 0.63687
Iteration 550: error is 0.63687
Iteration 560: error is 0.63686
Iteration 570: error is 0.63685
Iteration 580: error is 0.63684
Iteration 590: error is 0.63684
Iteration 600: error is 0.63683
Iteration 610: error is 0.63683
Iteration 620: error is 0.63682
Iteration 630: error is 0.63682
Iteration 640: error is 0.63682
Iteration 650: error is 0.63681
Iteration 660: error is 0.63681
Iteration 670: error is 0.63681
Iteration 680: error is 0.63681
Iteration 690: error is 0.6368
Iteration 700: error is 0.6368
Iteration 710: error is 0.6368
Iteration 720: error is 0.6368
Iteration 730: error is 0.6368
Iteration 740: error is 0.6368
Iteration 750: error is 0.6368
Iteration 760: error is 0.6368
Iteration 770: error is 0.6368
Iteration 780: error is 0.63679
Iteration 790: error is 0.63679
Iteration 800: error is 0.63679
Iteration 810: error is 0.63679
Iteration 820: error is 0.63679
Iteration 830: error is 0.63679
Iteration 840: error is 0.63679
Iteration 850: error is 0.63679

```
Iteration 860: error is 0.63679
Iteration 870: error is 0.63679
Iteration 880: error is 0.63679
Iteration 890: error is 0.63679
Iteration 900: error is 0.63679
Iteration 910: error is 0.63679
Iteration 920: error is 0.63679
Iteration 930: error is 0.63679
Iteration 940: error is 0.63679
Iteration 950: error is 0.63679
Iteration 960: error is 0.63679
Iteration 970: error is 0.63679
Iteration 980: error is 0.63679
Iteration 990: error is 0.63679
Iteration 1000: error is 0.63679
J_new = 0.7961
J_new = 0.7676
J_new = 0.7508
J_new = 0.7407
J_new = 0.7397
J_new = 0.7401
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.044
Iteration 20: error is 37.2852
Iteration 30: error is 36.9023
Iteration 40: error is 36.9713
Iteration 50: error is 37.3291
Iteration 60: error is 37.3776
Iteration 70: error is 37.3758
Iteration 80: error is 37.0007
Iteration 90: error is 37.5231
Iteration 100: error is 2.2548
Iteration 110: error is 1.1105
Iteration 120: error is 0.77691
Iteration 130: error is 0.70694
Iteration 140: error is 0.68543
Iteration 150: error is 0.67439
Iteration 160: error is 0.6676
Iteration 170: error is 0.66289
Iteration 180: error is 0.6593
Iteration 190: error is 0.65646
Iteration 200: error is 0.65432
Iteration 210: error is 0.65252
Iteration 220: error is 0.65091
Iteration 230: error is 0.64968
Iteration 240: error is 0.64861
Iteration 250: error is 0.6477
Iteration 260: error is 0.64629
Iteration 270: error is 0.64499
Iteration 280: error is 0.64369
Iteration 290: error is 0.64291
Iteration 300: error is 0.64231
Iteration 310: error is 0.64182
Iteration 320: error is 0.64142
Iteration 330: error is 0.64111
Iteration 340: error is 0.64086
Iteration 350: error is 0.64067
Iteration 360: error is 0.6405
Iteration 370: error is 0.64035
Iteration 380: error is 0.64024
Iteration 390: error is 0.64014
Iteration 400: error is 0.64006
Iteration 410: error is 0.63999
```

```
Iteration 420: error is 0.63993
Iteration 430: error is 0.63988
Iteration 440: error is 0.63983
Iteration 450: error is 0.63979
Iteration 460: error is 0.63976
Iteration 470: error is 0.63973
Iteration 480: error is 0.63971
Iteration 490: error is 0.63968
Iteration 500: error is 0.63966
Iteration 510: error is 0.63965
Iteration 520: error is 0.63963
Iteration 530: error is 0.63962
Iteration 540: error is 0.63961
Iteration 550: error is 0.63959
Iteration 560: error is 0.63958
Iteration 570: error is 0.63953
Iteration 580: error is 0.63952
Iteration 590: error is 0.63951
Iteration 600: error is 0.63951
Iteration 610: error is 0.6395
Iteration 620: error is 0.6395
Iteration 630: error is 0.63949
Iteration 640: error is 0.63949
Iteration 650: error is 0.63949
Iteration 660: error is 0.63948
Iteration 670: error is 0.63948
Iteration 680: error is 0.63948
Iteration 690: error is 0.63947
Iteration 700: error is 0.63947
Iteration 710: error is 0.63947
Iteration 720: error is 0.63947
Iteration 730: error is 0.63947
Iteration 740: error is 0.63947
Iteration 750: error is 0.63947
Iteration 760: error is 0.63946
Iteration 770: error is 0.63946
Iteration 780: error is 0.63946
Iteration 790: error is 0.63946
Iteration 800: error is 0.63946
Iteration 810: error is 0.63946
Iteration 820: error is 0.63946
Iteration 830: error is 0.63946
Iteration 840: error is 0.63946
Iteration 850: error is 0.63946
Iteration 860: error is 0.63946
Iteration 870: error is 0.63946
Iteration 880: error is 0.63946
Iteration 890: error is 0.63946
Iteration 900: error is 0.63946
Iteration 910: error is 0.63946
Iteration 920: error is 0.63946
Iteration 930: error is 0.63946
Iteration 940: error is 0.63946
Iteration 950: error is 0.63946
Iteration 960: error is 0.63946
Iteration 970: error is 0.63946
Iteration 980: error is 0.63946
Iteration 990: error is 0.63946
Iteration 1000: error is 0.63946
J_new = 0.8423
J_new = 0.8267
J_new = 0.8148
J_new = 0.8116
J_new = 0.8100
J_new = 0.8058
```

```
J_new = 0.8009
J_new = 0.7855
J_new = 0.7434
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9613
Iteration 20: error is 37.0512
Iteration 30: error is 36.9439
Iteration 40: error is 36.3122
Iteration 50: error is 37.2449
Iteration 60: error is 37.2423
Iteration 70: error is 37.3571
Iteration 80: error is 37.183
Iteration 90: error is 36.6816
Iteration 100: error is 2.3995
Iteration 110: error is 1.4243
Iteration 120: error is 0.91498
Iteration 130: error is 0.83367
Iteration 140: error is 0.79048
Iteration 150: error is 0.72422
Iteration 160: error is 0.67128
Iteration 170: error is 0.65964
Iteration 180: error is 0.65607
Iteration 190: error is 0.6532
Iteration 200: error is 0.65115
Iteration 210: error is 0.64949
Iteration 220: error is 0.64816
Iteration 230: error is 0.64699
Iteration 240: error is 0.64599
Iteration 250: error is 0.64517
Iteration 260: error is 0.64381
Iteration 270: error is 0.64237
Iteration 280: error is 0.64128
Iteration 290: error is 0.64045
Iteration 300: error is 0.63981
Iteration 310: error is 0.63934
Iteration 320: error is 0.63896
Iteration 330: error is 0.63864
Iteration 340: error is 0.63839
Iteration 350: error is 0.63819
Iteration 360: error is 0.63801
Iteration 370: error is 0.63787
Iteration 380: error is 0.63774
Iteration 390: error is 0.63764
Iteration 400: error is 0.63755
Iteration 410: error is 0.63748
Iteration 420: error is 0.63741
Iteration 430: error is 0.63736
Iteration 440: error is 0.63731
Iteration 450: error is 0.63726
Iteration 460: error is 0.63722
Iteration 470: error is 0.63719
Iteration 480: error is 0.63716
Iteration 490: error is 0.63713
Iteration 500: error is 0.63711
Iteration 510: error is 0.63709
Iteration 520: error is 0.63707
Iteration 530: error is 0.63705
Iteration 540: error is 0.63704
Iteration 550: error is 0.63702
Iteration 560: error is 0.63701
Iteration 570: error is 0.637
```

```
Iteration 580: error is 0.63699
Iteration 590: error is 0.63698
Iteration 600: error is 0.63697
Iteration 610: error is 0.63697
Iteration 620: error is 0.63696
Iteration 630: error is 0.63696
Iteration 640: error is 0.63695
Iteration 650: error is 0.63695
Iteration 660: error is 0.63694
Iteration 670: error is 0.63694
Iteration 680: error is 0.63693
Iteration 690: error is 0.63693
Iteration 700: error is 0.63693
Iteration 710: error is 0.63692
Iteration 720: error is 0.63692
Iteration 730: error is 0.63692
Iteration 740: error is 0.63692
Iteration 750: error is 0.63692
Iteration 760: error is 0.63691
Iteration 770: error is 0.63691
Iteration 780: error is 0.63691
Iteration 790: error is 0.63691
Iteration 800: error is 0.63691
Iteration 810: error is 0.63691
Iteration 820: error is 0.63691
Iteration 830: error is 0.63691
Iteration 840: error is 0.63691
Iteration 850: error is 0.6369
Iteration 860: error is 0.6369
Iteration 870: error is 0.6369
Iteration 880: error is 0.6369
Iteration 890: error is 0.6369
Iteration 900: error is 0.6369
Iteration 910: error is 0.6369
Iteration 920: error is 0.6369
Iteration 930: error is 0.6369
Iteration 940: error is 0.6369
Iteration 950: error is 0.6369
Iteration 960: error is 0.6369
Iteration 970: error is 0.6369
Iteration 980: error is 0.6369
Iteration 990: error is 0.6369
Iteration 1000: error is 0.6369
J_new = 0.8514
J_new = 0.8279
J_new = 0.8161
J_new = 0.8148
J_new = 0.8143
J_new = 0.8107
J_new = 0.8088
J_new = 0.8052
J_new = 0.8032
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0769
Iteration 20: error is 36.8821
Iteration 30: error is 36.7211
Iteration 40: error is 37.1192
Iteration 50: error is 36.8081
Iteration 60: error is 37.2307
```

Iteration 70: error is 36.5909
Iteration 80: error is 37.1964
Iteration 90: error is 37.4676
Iteration 100: error is 2.197
Iteration 110: error is 1.0871
Iteration 120: error is 0.81819
Iteration 130: error is 0.73957
Iteration 140: error is 0.68749
Iteration 150: error is 0.66553
Iteration 160: error is 0.65905
Iteration 170: error is 0.65407
Iteration 180: error is 0.65038
Iteration 190: error is 0.64744
Iteration 200: error is 0.64515
Iteration 210: error is 0.64347
Iteration 220: error is 0.64179
Iteration 230: error is 0.64051
Iteration 240: error is 0.6394
Iteration 250: error is 0.63844
Iteration 260: error is 0.63698
Iteration 270: error is 0.63541
Iteration 280: error is 0.63423
Iteration 290: error is 0.63335
Iteration 300: error is 0.63268
Iteration 310: error is 0.63215
Iteration 320: error is 0.63177
Iteration 330: error is 0.63144
Iteration 340: error is 0.63118
Iteration 350: error is 0.63097
Iteration 360: error is 0.63079
Iteration 370: error is 0.63065
Iteration 380: error is 0.63053
Iteration 390: error is 0.63042
Iteration 400: error is 0.63034
Iteration 410: error is 0.63027
Iteration 420: error is 0.63021
Iteration 430: error is 0.63015
Iteration 440: error is 0.63011
Iteration 450: error is 0.63007
Iteration 460: error is 0.63003
Iteration 470: error is 0.63
Iteration 480: error is 0.62997
Iteration 490: error is 0.62995
Iteration 500: error is 0.62992
Iteration 510: error is 0.6299
Iteration 520: error is 0.62989
Iteration 530: error is 0.62987
Iteration 540: error is 0.62986
Iteration 550: error is 0.62985
Iteration 560: error is 0.62984
Iteration 570: error is 0.62983
Iteration 580: error is 0.62982
Iteration 590: error is 0.62982
Iteration 600: error is 0.62981
Iteration 610: error is 0.6298
Iteration 620: error is 0.6298
Iteration 630: error is 0.62979
Iteration 640: error is 0.62979
Iteration 650: error is 0.62979
Iteration 660: error is 0.62978
Iteration 670: error is 0.62978
Iteration 680: error is 0.62978
Iteration 690: error is 0.62977
Iteration 700: error is 0.62977
Iteration 710: error is 0.62977

```
Iteration 720: error is 0.62977
Iteration 730: error is 0.62977
Iteration 740: error is 0.62977
Iteration 750: error is 0.62976
Iteration 760: error is 0.62976
Iteration 770: error is 0.62976
Iteration 780: error is 0.62976
Iteration 790: error is 0.62976
Iteration 800: error is 0.62976
Iteration 810: error is 0.62976
Iteration 820: error is 0.62976
Iteration 830: error is 0.62976
Iteration 840: error is 0.62976
Iteration 850: error is 0.62976
Iteration 860: error is 0.62976
Iteration 870: error is 0.62976
Iteration 880: error is 0.62976
Iteration 890: error is 0.62976
Iteration 900: error is 0.62976
Iteration 910: error is 0.62976
Iteration 920: error is 0.62975
Iteration 930: error is 0.62975
Iteration 940: error is 0.62975
Iteration 950: error is 0.62975
Iteration 960: error is 0.62975
Iteration 970: error is 0.62975
Iteration 980: error is 0.62975
Iteration 990: error is 0.62975
Iteration 1000: error is 0.62975
J_new = 0.8416
J_new = 0.8263
J_new = 0.8146
J_new = 0.8116
J_new = 0.8100
J_new = 0.8058
J_new = 0.8009
J_new = 0.7855
J_new = 0.7434
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.0457
Iteration 20: error is 37.3998
Iteration 30: error is 37.1825
Iteration 40: error is 37.0605
Iteration 50: error is 37.2708
Iteration 60: error is 37.0419
Iteration 70: error is 37.2445
Iteration 80: error is 37.3601
Iteration 90: error is 37.5471
Iteration 100: error is 2.2614
Iteration 110: error is 1.2836
Iteration 120: error is 0.81852
Iteration 130: error is 0.70513
Iteration 140: error is 0.68181
Iteration 150: error is 0.67123
Iteration 160: error is 0.66447
Iteration 170: error is 0.65933
Iteration 180: error is 0.65571
Iteration 190: error is 0.6535
Iteration 200: error is 0.65065
Iteration 210: error is 0.64884
Iteration 220: error is 0.64736
```

Iteration 230: error is 0.64612
Iteration 240: error is 0.64508
Iteration 250: error is 0.64415
Iteration 260: error is 0.64271
Iteration 270: error is 0.64115
Iteration 280: error is 0.64001
Iteration 290: error is 0.63919
Iteration 300: error is 0.63856
Iteration 310: error is 0.63807
Iteration 320: error is 0.63769
Iteration 330: error is 0.63739
Iteration 340: error is 0.63714
Iteration 350: error is 0.63694
Iteration 360: error is 0.63678
Iteration 370: error is 0.63664
Iteration 380: error is 0.63652
Iteration 390: error is 0.63643
Iteration 400: error is 0.63634
Iteration 410: error is 0.63628
Iteration 420: error is 0.63621
Iteration 430: error is 0.63616
Iteration 440: error is 0.63612
Iteration 450: error is 0.63608
Iteration 460: error is 0.63605
Iteration 470: error is 0.63602
Iteration 480: error is 0.63599
Iteration 490: error is 0.63597
Iteration 500: error is 0.63595
Iteration 510: error is 0.63593
Iteration 520: error is 0.63591
Iteration 530: error is 0.6359
Iteration 540: error is 0.63589
Iteration 550: error is 0.63588
Iteration 560: error is 0.63587
Iteration 570: error is 0.63586
Iteration 580: error is 0.63585
Iteration 590: error is 0.63584
Iteration 600: error is 0.63583
Iteration 610: error is 0.63583
Iteration 620: error is 0.63582
Iteration 630: error is 0.63582
Iteration 640: error is 0.63582
Iteration 650: error is 0.63581
Iteration 660: error is 0.63581
Iteration 670: error is 0.6358
Iteration 680: error is 0.6358
Iteration 690: error is 0.6358
Iteration 700: error is 0.6358
Iteration 710: error is 0.6358
Iteration 720: error is 0.63579
Iteration 730: error is 0.63579
Iteration 740: error is 0.63579
Iteration 750: error is 0.63579
Iteration 760: error is 0.63579
Iteration 770: error is 0.63579
Iteration 780: error is 0.63579
Iteration 790: error is 0.63578
Iteration 800: error is 0.63578
Iteration 810: error is 0.63578
Iteration 820: error is 0.63578
Iteration 830: error is 0.63578
Iteration 840: error is 0.63578
Iteration 850: error is 0.63578
Iteration 860: error is 0.63578
Iteration 870: error is 0.63578

```
Iteration 880: error is 0.63578
Iteration 890: error is 0.63578
Iteration 900: error is 0.63578
Iteration 910: error is 0.63578
Iteration 920: error is 0.63578
Iteration 930: error is 0.63578
Iteration 940: error is 0.63578
Iteration 950: error is 0.63578
Iteration 960: error is 0.63578
Iteration 970: error is 0.63578
Iteration 980: error is 0.63578
Iteration 990: error is 0.63578
Iteration 1000: error is 0.63578
J_new = 0.8693
J_new = 0.8358
J_new = 0.8233
J_new = 0.8142
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2299
Iteration 20: error is 37.1384
Iteration 30: error is 36.8842
Iteration 40: error is 36.7533
Iteration 50: error is 37.0079
Iteration 60: error is 36.7442
Iteration 70: error is 36.6901
Iteration 80: error is 36.8998
Iteration 90: error is 37.4389
Iteration 100: error is 2.117
Iteration 110: error is 1.095
Iteration 120: error is 0.8363
Iteration 130: error is 0.7183
Iteration 140: error is 0.68598
Iteration 150: error is 0.67529
Iteration 160: error is 0.66817
Iteration 170: error is 0.66329
Iteration 180: error is 0.65958
Iteration 190: error is 0.65669
Iteration 200: error is 0.65446
Iteration 210: error is 0.65266
Iteration 220: error is 0.65109
Iteration 230: error is 0.64977
Iteration 240: error is 0.64869
Iteration 250: error is 0.64775
Iteration 260: error is 0.6463
Iteration 270: error is 0.64472
Iteration 280: error is 0.64362
Iteration 290: error is 0.64281
Iteration 300: error is 0.64219
Iteration 310: error is 0.64173
Iteration 320: error is 0.64136
Iteration 330: error is 0.64105
Iteration 340: error is 0.64082
Iteration 350: error is 0.64062
Iteration 360: error is 0.64047
Iteration 370: error is 0.64033
```

```
Iteration 380: error is 0.64022
Iteration 390: error is 0.64013
Iteration 400: error is 0.64005
Iteration 410: error is 0.63998
Iteration 420: error is 0.63992
Iteration 430: error is 0.63987
Iteration 440: error is 0.63983
Iteration 450: error is 0.63979
Iteration 460: error is 0.63976
Iteration 470: error is 0.63973
Iteration 480: error is 0.63971
Iteration 490: error is 0.63969
Iteration 500: error is 0.63967
Iteration 510: error is 0.63965
Iteration 520: error is 0.63964
Iteration 530: error is 0.63963
Iteration 540: error is 0.63962
Iteration 550: error is 0.63961
Iteration 560: error is 0.6396
Iteration 570: error is 0.63959
Iteration 580: error is 0.63958
Iteration 590: error is 0.63958
Iteration 600: error is 0.63957
Iteration 610: error is 0.63957
Iteration 620: error is 0.63956
Iteration 630: error is 0.63956
Iteration 640: error is 0.63956
Iteration 650: error is 0.63955
Iteration 660: error is 0.63955
Iteration 670: error is 0.63955
Iteration 680: error is 0.63955
Iteration 690: error is 0.63954
Iteration 700: error is 0.63954
Iteration 710: error is 0.63954
Iteration 720: error is 0.63954
Iteration 730: error is 0.63954
Iteration 740: error is 0.63954
Iteration 750: error is 0.63954
Iteration 760: error is 0.63954
Iteration 770: error is 0.63953
Iteration 780: error is 0.63953
Iteration 790: error is 0.63953
Iteration 800: error is 0.63953
Iteration 810: error is 0.63953
Iteration 820: error is 0.63953
Iteration 830: error is 0.63953
Iteration 840: error is 0.63953
Iteration 850: error is 0.63953
Iteration 860: error is 0.63953
Iteration 870: error is 0.63953
Iteration 880: error is 0.63953
Iteration 890: error is 0.63953
Iteration 900: error is 0.63953
Iteration 910: error is 0.63953
Iteration 920: error is 0.63953
Iteration 930: error is 0.63953
Iteration 940: error is 0.63953
Iteration 950: error is 0.63953
Iteration 960: error is 0.63953
Iteration 970: error is 0.63953
Iteration 980: error is 0.63953
Iteration 990: error is 0.63953
Iteration 1000: error is 0.63953
J_new = 0.8429
J_new = 0.8271
```

```
J_new = 0.8166
J_new = 0.8150
J_new = 0.8145
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.3063
Iteration 20: error is 36.6862
Iteration 30: error is 37.0244
Iteration 40: error is 36.9222
Iteration 50: error is 36.9102
Iteration 60: error is 36.9089
Iteration 70: error is 37.1668
Iteration 80: error is 37.636
Iteration 90: error is 37.6127
Iteration 100: error is 2.2423
Iteration 110: error is 1.2087
Iteration 120: error is 0.82911
Iteration 130: error is 0.76046
Iteration 140: error is 0.6816
Iteration 150: error is 0.66893
Iteration 160: error is 0.66129
Iteration 170: error is 0.65635
Iteration 180: error is 0.65247
Iteration 190: error is 0.64973
Iteration 200: error is 0.64751
Iteration 210: error is 0.64565
Iteration 220: error is 0.64416
Iteration 230: error is 0.64307
Iteration 240: error is 0.64194
Iteration 250: error is 0.64103
Iteration 260: error is 0.63964
Iteration 270: error is 0.63816
Iteration 280: error is 0.63707
Iteration 290: error is 0.63622
Iteration 300: error is 0.63557
Iteration 310: error is 0.63505
Iteration 320: error is 0.63467
Iteration 330: error is 0.63437
Iteration 340: error is 0.63411
Iteration 350: error is 0.63391
Iteration 360: error is 0.63374
Iteration 370: error is 0.63361
Iteration 380: error is 0.6335
Iteration 390: error is 0.6334
Iteration 400: error is 0.63332
Iteration 410: error is 0.63325
Iteration 420: error is 0.63319
Iteration 430: error is 0.63314
Iteration 440: error is 0.63309
Iteration 450: error is 0.63306
Iteration 460: error is 0.63302
Iteration 470: error is 0.63299
Iteration 480: error is 0.63297
Iteration 490: error is 0.63295
Iteration 500: error is 0.63293
Iteration 510: error is 0.63291
```

```
Iteration 520: error is 0.6329
Iteration 530: error is 0.63288
Iteration 540: error is 0.63287
Iteration 550: error is 0.63286
Iteration 560: error is 0.63285
Iteration 570: error is 0.63285
Iteration 580: error is 0.63284
Iteration 590: error is 0.63283
Iteration 600: error is 0.63283
Iteration 610: error is 0.63282
Iteration 620: error is 0.63282
Iteration 630: error is 0.63281
Iteration 640: error is 0.63281
Iteration 650: error is 0.63281
Iteration 660: error is 0.63281
Iteration 670: error is 0.6328
Iteration 680: error is 0.6328
Iteration 690: error is 0.6328
Iteration 700: error is 0.6328
Iteration 710: error is 0.6328
Iteration 720: error is 0.63279
Iteration 730: error is 0.63279
Iteration 740: error is 0.63279
Iteration 750: error is 0.63279
Iteration 760: error is 0.63279
Iteration 770: error is 0.63279
Iteration 780: error is 0.63279
Iteration 790: error is 0.63279
Iteration 800: error is 0.63279
Iteration 810: error is 0.63279
Iteration 820: error is 0.63279
Iteration 830: error is 0.63279
Iteration 840: error is 0.63279
Iteration 850: error is 0.63279
Iteration 860: error is 0.63279
Iteration 870: error is 0.63279
Iteration 880: error is 0.63279
Iteration 890: error is 0.63279
Iteration 900: error is 0.63279
Iteration 910: error is 0.63279
Iteration 920: error is 0.63278
Iteration 930: error is 0.63278
Iteration 940: error is 0.63278
Iteration 950: error is 0.63278
Iteration 960: error is 0.63278
Iteration 970: error is 0.63278
Iteration 980: error is 0.63278
Iteration 990: error is 0.63278
Iteration 1000: error is 0.63278
J_new = 0.8689
J_new = 0.8388
J_new = 0.8218
J_new = 0.8099
J_new = 0.8060
J_new = 0.8011
J_new = 0.7854
J_new = 0.7430
J_new = 0.7416
J_new = 0.7423
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.0725
Iteration 20: error is 37.4635
Iteration 30: error is 37.3699
```

Iteration 40: error is 36.6991
Iteration 50: error is 36.884
Iteration 60: error is 36.9212
Iteration 70: error is 36.905
Iteration 80: error is 37.2185
Iteration 90: error is 37.3731
Iteration 100: error is 2.2393
Iteration 110: error is 1.2014
Iteration 120: error is 0.81819
Iteration 130: error is 0.72749
Iteration 140: error is 0.68419
Iteration 150: error is 0.66698
Iteration 160: error is 0.66062
Iteration 170: error is 0.6557
Iteration 180: error is 0.652
Iteration 190: error is 0.64908
Iteration 200: error is 0.64683
Iteration 210: error is 0.64509
Iteration 220: error is 0.64347
Iteration 230: error is 0.64215
Iteration 240: error is 0.64107
Iteration 250: error is 0.64014
Iteration 260: error is 0.63861
Iteration 270: error is 0.63703
Iteration 280: error is 0.63581
Iteration 290: error is 0.63487
Iteration 300: error is 0.63419
Iteration 310: error is 0.63368
Iteration 320: error is 0.63328
Iteration 330: error is 0.63297
Iteration 340: error is 0.63271
Iteration 350: error is 0.63249
Iteration 360: error is 0.63232
Iteration 370: error is 0.63217
Iteration 380: error is 0.63205
Iteration 390: error is 0.63194
Iteration 400: error is 0.63185
Iteration 410: error is 0.63177
Iteration 420: error is 0.6317
Iteration 430: error is 0.63164
Iteration 440: error is 0.63159
Iteration 450: error is 0.63155
Iteration 460: error is 0.63151
Iteration 470: error is 0.63147
Iteration 480: error is 0.63144
Iteration 490: error is 0.63141
Iteration 500: error is 0.63139
Iteration 510: error is 0.63137
Iteration 520: error is 0.63135
Iteration 530: error is 0.63133
Iteration 540: error is 0.63132
Iteration 550: error is 0.63131
Iteration 560: error is 0.63129
Iteration 570: error is 0.63128
Iteration 580: error is 0.63127
Iteration 590: error is 0.63127
Iteration 600: error is 0.63126
Iteration 610: error is 0.63125
Iteration 620: error is 0.63124
Iteration 630: error is 0.63124
Iteration 640: error is 0.63123
Iteration 650: error is 0.63123
Iteration 660: error is 0.63122
Iteration 670: error is 0.63122
Iteration 680: error is 0.63122

```
Iteration 690: error is 0.63121
Iteration 700: error is 0.63121
Iteration 710: error is 0.63121
Iteration 720: error is 0.63121
Iteration 730: error is 0.63121
Iteration 740: error is 0.6312
Iteration 750: error is 0.6312
Iteration 760: error is 0.6312
Iteration 770: error is 0.6312
Iteration 780: error is 0.6312
Iteration 790: error is 0.6312
Iteration 800: error is 0.63119
Iteration 810: error is 0.63119
Iteration 820: error is 0.63119
Iteration 830: error is 0.63119
Iteration 840: error is 0.63119
Iteration 850: error is 0.63119
Iteration 860: error is 0.63119
Iteration 870: error is 0.63119
Iteration 880: error is 0.63119
Iteration 890: error is 0.63119
Iteration 900: error is 0.63119
Iteration 910: error is 0.63119
Iteration 920: error is 0.63119
Iteration 930: error is 0.63119
Iteration 940: error is 0.63119
Iteration 950: error is 0.63119
Iteration 960: error is 0.63119
Iteration 970: error is 0.63119
Iteration 980: error is 0.63119
Iteration 990: error is 0.63119
Iteration 1000: error is 0.63118
J_new = 0.8324
J_new = 0.8189
J_new = 0.8146
J_new = 0.8126
J_new = 0.8094
J_new = 0.8069
J_new = 0.8004
J_new = 0.7865
J_new = 0.7426
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.8127
Iteration 20: error is 36.1601
Iteration 30: error is 36.0184
Iteration 40: error is 36.899
Iteration 50: error is 36.5609
Iteration 60: error is 37.1529
Iteration 70: error is 36.8295
Iteration 80: error is 36.7258
Iteration 90: error is 37.1488
Iteration 100: error is 2.0237
Iteration 110: error is 1.2771
Iteration 120: error is 0.822
Iteration 130: error is 0.74095
Iteration 140: error is 0.68696
Iteration 150: error is 0.67031
Iteration 160: error is 0.664
Iteration 170: error is 0.65942
Iteration 180: error is 0.65578
Iteration 190: error is 0.6531
Iteration 200: error is 0.65091
```

Iteration 210: error is 0.64919
Iteration 220: error is 0.64773
Iteration 230: error is 0.64652
Iteration 240: error is 0.64559
Iteration 250: error is 0.6446
Iteration 260: error is 0.64323
Iteration 270: error is 0.6418
Iteration 280: error is 0.64075
Iteration 290: error is 0.63999
Iteration 300: error is 0.6394
Iteration 310: error is 0.63893
Iteration 320: error is 0.63856
Iteration 330: error is 0.63829
Iteration 340: error is 0.63806
Iteration 350: error is 0.63786
Iteration 360: error is 0.6377
Iteration 370: error is 0.63758
Iteration 380: error is 0.63746
Iteration 390: error is 0.63737
Iteration 400: error is 0.6373
Iteration 410: error is 0.63723
Iteration 420: error is 0.63717
Iteration 430: error is 0.63713
Iteration 440: error is 0.63708
Iteration 450: error is 0.63705
Iteration 460: error is 0.63701
Iteration 470: error is 0.63699
Iteration 480: error is 0.63696
Iteration 490: error is 0.63694
Iteration 500: error is 0.63692
Iteration 510: error is 0.63691
Iteration 520: error is 0.63689
Iteration 530: error is 0.63688
Iteration 540: error is 0.63687
Iteration 550: error is 0.63686
Iteration 560: error is 0.63685
Iteration 570: error is 0.63684
Iteration 580: error is 0.63684
Iteration 590: error is 0.63683
Iteration 600: error is 0.63682
Iteration 610: error is 0.63682
Iteration 620: error is 0.63681
Iteration 630: error is 0.63681
Iteration 640: error is 0.63681
Iteration 650: error is 0.6368
Iteration 660: error is 0.6368
Iteration 670: error is 0.6368
Iteration 680: error is 0.6368
Iteration 690: error is 0.63679
Iteration 700: error is 0.63679
Iteration 710: error is 0.63679
Iteration 720: error is 0.63679
Iteration 730: error is 0.63679
Iteration 740: error is 0.63679
Iteration 750: error is 0.63679
Iteration 760: error is 0.63679
Iteration 770: error is 0.63679
Iteration 780: error is 0.63678
Iteration 790: error is 0.63678
Iteration 800: error is 0.63678
Iteration 810: error is 0.63678
Iteration 820: error is 0.63678
Iteration 830: error is 0.63678
Iteration 840: error is 0.63678
Iteration 850: error is 0.63678

```
Iteration 860: error is 0.63678
Iteration 870: error is 0.63678
Iteration 880: error is 0.63678
Iteration 890: error is 0.63678
Iteration 900: error is 0.63678
Iteration 910: error is 0.63678
Iteration 920: error is 0.63678
Iteration 930: error is 0.63678
Iteration 940: error is 0.63678
Iteration 950: error is 0.63678
Iteration 960: error is 0.63678
Iteration 970: error is 0.63678
Iteration 980: error is 0.63678
Iteration 990: error is 0.63678
Iteration 1000: error is 0.63678
J_new = 0.8346
J_new = 0.8192
J_new = 0.8171
J_new = 0.8162
J_new = 0.8139
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.5344
Iteration 20: error is 36.6532
Iteration 30: error is 36.6515
Iteration 40: error is 36.8431
Iteration 50: error is 36.5851
Iteration 60: error is 36.9775
Iteration 70: error is 37.4402
Iteration 80: error is 37.3687
Iteration 90: error is 37.0607
Iteration 100: error is 2.1836
Iteration 110: error is 0.98028
Iteration 120: error is 0.74921
Iteration 130: error is 0.70049
Iteration 140: error is 0.68262
Iteration 150: error is 0.67238
Iteration 160: error is 0.6654
Iteration 170: error is 0.66062
Iteration 180: error is 0.65682
Iteration 190: error is 0.654
Iteration 200: error is 0.65177
Iteration 210: error is 0.64995
Iteration 220: error is 0.64852
Iteration 230: error is 0.64735
Iteration 240: error is 0.64628
Iteration 250: error is 0.6454
Iteration 260: error is 0.6441
Iteration 270: error is 0.64267
Iteration 280: error is 0.64154
Iteration 290: error is 0.64073
Iteration 300: error is 0.64013
Iteration 310: error is 0.63967
Iteration 320: error is 0.63929
Iteration 330: error is 0.63901
```

Iteration 340: error is 0.63877
Iteration 350: error is 0.63856
Iteration 360: error is 0.6384
Iteration 370: error is 0.63827
Iteration 380: error is 0.63815
Iteration 390: error is 0.63806
Iteration 400: error is 0.63798
Iteration 410: error is 0.63792
Iteration 420: error is 0.63786
Iteration 430: error is 0.63781
Iteration 440: error is 0.63777
Iteration 450: error is 0.63773
Iteration 460: error is 0.6377
Iteration 470: error is 0.63767
Iteration 480: error is 0.63765
Iteration 490: error is 0.63763
Iteration 500: error is 0.63761
Iteration 510: error is 0.63759
Iteration 520: error is 0.63758
Iteration 530: error is 0.63757
Iteration 540: error is 0.63756
Iteration 550: error is 0.63755
Iteration 560: error is 0.63754
Iteration 570: error is 0.63753
Iteration 580: error is 0.63753
Iteration 590: error is 0.63752
Iteration 600: error is 0.63752
Iteration 610: error is 0.63751
Iteration 620: error is 0.63751
Iteration 630: error is 0.6375
Iteration 640: error is 0.6375
Iteration 650: error is 0.6375
Iteration 660: error is 0.6375
Iteration 670: error is 0.63749
Iteration 680: error is 0.63749
Iteration 690: error is 0.63749
Iteration 700: error is 0.63749
Iteration 710: error is 0.63749
Iteration 720: error is 0.63749
Iteration 730: error is 0.63748
Iteration 740: error is 0.63748
Iteration 750: error is 0.63748
Iteration 760: error is 0.63748
Iteration 770: error is 0.63748
Iteration 780: error is 0.63748
Iteration 790: error is 0.63748
Iteration 800: error is 0.63748
Iteration 810: error is 0.63748
Iteration 820: error is 0.63748
Iteration 830: error is 0.63748
Iteration 840: error is 0.63748
Iteration 850: error is 0.63748
Iteration 860: error is 0.63748
Iteration 870: error is 0.63748
Iteration 880: error is 0.63748
Iteration 890: error is 0.63748
Iteration 900: error is 0.63748
Iteration 910: error is 0.63748
Iteration 920: error is 0.63748
Iteration 930: error is 0.63748
Iteration 940: error is 0.63748
Iteration 950: error is 0.63748
Iteration 960: error is 0.63748
Iteration 970: error is 0.63748
Iteration 980: error is 0.63748

```
Iteration 990: error is 0.63748
Iteration 1000: error is 0.63748
J_new = 0.8459
J_new = 0.8294
J_new = 0.8188
J_new = 0.8162
J_new = 0.8166
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1785
Iteration 20: error is 37.0989
Iteration 30: error is 37.0646
Iteration 40: error is 36.9653
Iteration 50: error is 37.0603
Iteration 60: error is 37.5136
Iteration 70: error is 37.5363
Iteration 80: error is 37.5086
Iteration 90: error is 37.8399
Iteration 100: error is 2.1363
Iteration 110: error is 1.1956
Iteration 120: error is 0.78194
Iteration 130: error is 0.71672
Iteration 140: error is 0.68139
Iteration 150: error is 0.66988
Iteration 160: error is 0.66422
Iteration 170: error is 0.65947
Iteration 180: error is 0.65618
Iteration 190: error is 0.65337
Iteration 200: error is 0.65122
Iteration 210: error is 0.64944
Iteration 220: error is 0.64791
Iteration 230: error is 0.64645
Iteration 240: error is 0.64364
Iteration 250: error is 0.64274
Iteration 260: error is 0.6413
Iteration 270: error is 0.63974
Iteration 280: error is 0.63864
Iteration 290: error is 0.63785
Iteration 300: error is 0.63726
Iteration 310: error is 0.63678
Iteration 320: error is 0.63642
Iteration 330: error is 0.63613
Iteration 340: error is 0.63589
Iteration 350: error is 0.63569
Iteration 360: error is 0.63553
Iteration 370: error is 0.6354
Iteration 380: error is 0.63528
Iteration 390: error is 0.63519
Iteration 400: error is 0.63511
Iteration 410: error is 0.63504
Iteration 420: error is 0.63498
Iteration 430: error is 0.63493
Iteration 440: error is 0.63488
Iteration 450: error is 0.63484
Iteration 460: error is 0.63481
Iteration 470: error is 0.63478
Iteration 480: error is 0.63475
Iteration 490: error is 0.63473
Iteration 500: error is 0.63471
Iteration 510: error is 0.63469
Iteration 520: error is 0.63467
Iteration 530: error is 0.63466
Iteration 540: error is 0.63465
Iteration 550: error is 0.63464
```

```
Iteration 560: error is 0.63463
Iteration 570: error is 0.63462
Iteration 580: error is 0.63461
Iteration 590: error is 0.63461
Iteration 600: error is 0.6346
Iteration 610: error is 0.63459
Iteration 620: error is 0.63459
Iteration 630: error is 0.63458
Iteration 640: error is 0.63458
Iteration 650: error is 0.63458
Iteration 660: error is 0.63457
Iteration 670: error is 0.63457
Iteration 680: error is 0.63457
Iteration 690: error is 0.63457
Iteration 700: error is 0.63457
Iteration 710: error is 0.63456
Iteration 720: error is 0.63456
Iteration 730: error is 0.63456
Iteration 740: error is 0.63456
Iteration 750: error is 0.63456
Iteration 760: error is 0.63456
Iteration 770: error is 0.63456
Iteration 780: error is 0.63456
Iteration 790: error is 0.63455
Iteration 800: error is 0.63455
Iteration 810: error is 0.63455
Iteration 820: error is 0.63455
Iteration 830: error is 0.63455
Iteration 840: error is 0.63455
Iteration 850: error is 0.63455
Iteration 860: error is 0.63455
Iteration 870: error is 0.63455
Iteration 880: error is 0.63455
Iteration 890: error is 0.63455
Iteration 900: error is 0.63455
Iteration 910: error is 0.63455
Iteration 920: error is 0.63455
Iteration 930: error is 0.63455
Iteration 940: error is 0.63455
Iteration 950: error is 0.63455
Iteration 960: error is 0.63455
Iteration 970: error is 0.63455
Iteration 980: error is 0.63455
Iteration 990: error is 0.63455
Iteration 1000: error is 0.63455
J_new = 0.8486
J_new = 0.8265
J_new = 0.8147
J_new = 0.8115
J_new = 0.8101
J_new = 0.8057
J_new = 0.8010
J_new = 0.7854
J_new = 0.7435
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.671
Iteration 20: error is 36.9636
Iteration 30: error is 36.454
Iteration 40: error is 36.8364
Iteration 50: error is 37.1997
Iteration 60: error is 37.2005
```

Iteration 70: error is 37.2284
Iteration 80: error is 37.005
Iteration 90: error is 37.0916
Iteration 100: error is 2.2722
Iteration 110: error is 1.2857
Iteration 120: error is 0.96325
Iteration 130: error is 0.80245
Iteration 140: error is 0.73453
Iteration 150: error is 0.70946
Iteration 160: error is 0.69853
Iteration 170: error is 0.69437
Iteration 180: error is 0.69104
Iteration 190: error is 0.68853
Iteration 200: error is 0.68666
Iteration 210: error is 0.68508
Iteration 220: error is 0.68369
Iteration 230: error is 0.68259
Iteration 240: error is 0.68152
Iteration 250: error is 0.68071
Iteration 260: error is 0.67948
Iteration 270: error is 0.67823
Iteration 280: error is 0.67724
Iteration 290: error is 0.67201
Iteration 300: error is 0.65285
Iteration 310: error is 0.64444
Iteration 320: error is 0.64224
Iteration 330: error is 0.64121
Iteration 340: error is 0.6406
Iteration 350: error is 0.6401
Iteration 360: error is 0.63985
Iteration 370: error is 0.63965
Iteration 380: error is 0.63947
Iteration 390: error is 0.63931
Iteration 400: error is 0.63918
Iteration 410: error is 0.63906
Iteration 420: error is 0.63896
Iteration 430: error is 0.63887
Iteration 440: error is 0.6388
Iteration 450: error is 0.63874
Iteration 460: error is 0.63869
Iteration 470: error is 0.63864
Iteration 480: error is 0.6386
Iteration 490: error is 0.63856
Iteration 500: error is 0.63853
Iteration 510: error is 0.63851
Iteration 520: error is 0.63848
Iteration 530: error is 0.63846
Iteration 540: error is 0.63844
Iteration 550: error is 0.63843
Iteration 560: error is 0.63841
Iteration 570: error is 0.6384
Iteration 580: error is 0.63839
Iteration 590: error is 0.63838
Iteration 600: error is 0.63837
Iteration 610: error is 0.63836
Iteration 620: error is 0.63836
Iteration 630: error is 0.63835
Iteration 640: error is 0.63834
Iteration 650: error is 0.63834
Iteration 660: error is 0.63833
Iteration 670: error is 0.63833
Iteration 680: error is 0.63833
Iteration 690: error is 0.63832
Iteration 700: error is 0.63832
Iteration 710: error is 0.63832

```
Iteration 720: error is 0.63832
Iteration 730: error is 0.63831
Iteration 740: error is 0.63831
Iteration 750: error is 0.63831
Iteration 760: error is 0.63831
Iteration 770: error is 0.63831
Iteration 780: error is 0.63831
Iteration 790: error is 0.6383
Iteration 800: error is 0.6383
Iteration 810: error is 0.6383
Iteration 820: error is 0.6383
Iteration 830: error is 0.6383
Iteration 840: error is 0.6383
Iteration 850: error is 0.6383
Iteration 860: error is 0.6383
Iteration 870: error is 0.6383
Iteration 880: error is 0.6383
Iteration 890: error is 0.6383
Iteration 900: error is 0.6383
Iteration 910: error is 0.6383
Iteration 920: error is 0.6383
Iteration 930: error is 0.6383
Iteration 940: error is 0.6383
Iteration 950: error is 0.6383
Iteration 960: error is 0.63829
Iteration 970: error is 0.63829
Iteration 980: error is 0.63829
Iteration 990: error is 0.63829
Iteration 1000: error is 0.63829
J_new = 0.8468
J_new = 0.8329
J_new = 0.8238
J_new = 0.8217
J_new = 0.8228
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.6529
Iteration 20: error is 36.8493
Iteration 30: error is 36.9484
Iteration 40: error is 37.6785
Iteration 50: error is 37.3785
Iteration 60: error is 37.184
Iteration 70: error is 37.5954
Iteration 80: error is 37.4321
Iteration 90: error is 37.7045
Iteration 100: error is 2.3193
Iteration 110: error is 1.1669
Iteration 120: error is 0.86169
Iteration 130: error is 0.72219
Iteration 140: error is 0.72025
Iteration 150: error is 0.68362
Iteration 160: error is 0.66154
Iteration 170: error is 0.6569
Iteration 180: error is 0.65361
Iteration 190: error is 0.65036
Iteration 200: error is 0.64805
Iteration 210: error is 0.64631
Iteration 220: error is 0.64483
Iteration 230: error is 0.64363
Iteration 240: error is 0.64268
Iteration 250: error is 0.64166
Iteration 260: error is 0.64023
Iteration 270: error is 0.63875
Iteration 280: error is 0.63757
```

Iteration 290: error is 0.63664
Iteration 300: error is 0.63583
Iteration 310: error is 0.63532
Iteration 320: error is 0.63492
Iteration 330: error is 0.63462
Iteration 340: error is 0.63432
Iteration 350: error is 0.63318
Iteration 360: error is 0.63213
Iteration 370: error is 0.63163
Iteration 380: error is 0.63135
Iteration 390: error is 0.6312
Iteration 400: error is 0.6311
Iteration 410: error is 0.63102
Iteration 420: error is 0.63095
Iteration 430: error is 0.63088
Iteration 440: error is 0.63083
Iteration 450: error is 0.63079
Iteration 460: error is 0.63075
Iteration 470: error is 0.63071
Iteration 480: error is 0.63068
Iteration 490: error is 0.63066
Iteration 500: error is 0.63064
Iteration 510: error is 0.63062
Iteration 520: error is 0.6306
Iteration 530: error is 0.63058
Iteration 540: error is 0.63057
Iteration 550: error is 0.63056
Iteration 560: error is 0.63055
Iteration 570: error is 0.63054
Iteration 580: error is 0.63053
Iteration 590: error is 0.63052
Iteration 600: error is 0.63052
Iteration 610: error is 0.63051
Iteration 620: error is 0.63051
Iteration 630: error is 0.6305
Iteration 640: error is 0.6305
Iteration 650: error is 0.63049
Iteration 660: error is 0.63049
Iteration 670: error is 0.63049
Iteration 680: error is 0.63049
Iteration 690: error is 0.63048
Iteration 700: error is 0.63048
Iteration 710: error is 0.63048
Iteration 720: error is 0.63048
Iteration 730: error is 0.63048
Iteration 740: error is 0.63047
Iteration 750: error is 0.63047
Iteration 760: error is 0.63047
Iteration 770: error is 0.63047
Iteration 780: error is 0.63047
Iteration 790: error is 0.63047
Iteration 800: error is 0.63047
Iteration 810: error is 0.63047
Iteration 820: error is 0.63047
Iteration 830: error is 0.63047
Iteration 840: error is 0.63047
Iteration 850: error is 0.63047
Iteration 860: error is 0.63047
Iteration 870: error is 0.63047
Iteration 880: error is 0.63046
Iteration 890: error is 0.63046
Iteration 900: error is 0.63046
Iteration 910: error is 0.63046
Iteration 920: error is 0.63046
Iteration 930: error is 0.63046

```
Iteration 940: error is 0.63046
Iteration 950: error is 0.63046
Iteration 960: error is 0.63046
Iteration 970: error is 0.63046
Iteration 980: error is 0.63046
Iteration 990: error is 0.63046
Iteration 1000: error is 0.63046
J_new = 0.8091
J_new = 0.7974
J_new = 0.7740
J_new = 0.7542
J_new = 0.7457
J_new = 0.7393
J_new = 0.7386
J_new = 0.7396
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.7344
Iteration 20: error is 37.0594
Iteration 30: error is 36.785
Iteration 40: error is 36.7658
Iteration 50: error is 37.298
Iteration 60: error is 37.361
Iteration 70: error is 37.3699
Iteration 80: error is 37.5414
Iteration 90: error is 37.3151
Iteration 100: error is 2.2833
Iteration 110: error is 1.1606
Iteration 120: error is 0.83473
Iteration 130: error is 0.71549
Iteration 140: error is 0.69997
Iteration 150: error is 0.67847
Iteration 160: error is 0.67277
Iteration 170: error is 0.66849
Iteration 180: error is 0.66525
Iteration 190: error is 0.66267
Iteration 200: error is 0.66076
Iteration 210: error is 0.65906
Iteration 220: error is 0.65772
Iteration 230: error is 0.65659
Iteration 240: error is 0.65557
Iteration 250: error is 0.6547
Iteration 260: error is 0.65337
Iteration 270: error is 0.65185
Iteration 280: error is 0.65083
Iteration 290: error is 0.64958
Iteration 300: error is 0.64864
Iteration 310: error is 0.64816
Iteration 320: error is 0.6478
Iteration 330: error is 0.64752
Iteration 340: error is 0.64727
Iteration 350: error is 0.64705
Iteration 360: error is 0.64688
Iteration 370: error is 0.64673
Iteration 380: error is 0.64661
Iteration 390: error is 0.64651
Iteration 400: error is 0.64642
Iteration 410: error is 0.64635
Iteration 420: error is 0.64628
Iteration 430: error is 0.64623
Iteration 440: error is 0.64618
Iteration 450: error is 0.64614
Iteration 460: error is 0.64611
Iteration 470: error is 0.64608
```

```
Iteration 480: error is 0.64605
Iteration 490: error is 0.64603
Iteration 500: error is 0.64601
Iteration 510: error is 0.64599
Iteration 520: error is 0.64597
Iteration 530: error is 0.64596
Iteration 540: error is 0.64595
Iteration 550: error is 0.64594
Iteration 560: error is 0.64593
Iteration 570: error is 0.64592
Iteration 580: error is 0.64591
Iteration 590: error is 0.64591
Iteration 600: error is 0.6459
Iteration 610: error is 0.64589
Iteration 620: error is 0.64589
Iteration 630: error is 0.64589
Iteration 640: error is 0.64588
Iteration 650: error is 0.64588
Iteration 660: error is 0.64588
Iteration 670: error is 0.64587
Iteration 680: error is 0.64587
Iteration 690: error is 0.64587
Iteration 700: error is 0.64587
Iteration 710: error is 0.64587
Iteration 720: error is 0.64586
Iteration 730: error is 0.64586
Iteration 740: error is 0.64586
Iteration 750: error is 0.64586
Iteration 760: error is 0.64586
Iteration 770: error is 0.64586
Iteration 780: error is 0.64586
Iteration 790: error is 0.64586
Iteration 800: error is 0.64586
Iteration 810: error is 0.64586
Iteration 820: error is 0.64586
Iteration 830: error is 0.64586
Iteration 840: error is 0.64586
Iteration 850: error is 0.64585
Iteration 860: error is 0.64585
Iteration 870: error is 0.64585
Iteration 880: error is 0.64585
Iteration 890: error is 0.64585
Iteration 900: error is 0.64585
Iteration 910: error is 0.64585
Iteration 920: error is 0.64585
Iteration 930: error is 0.64585
Iteration 940: error is 0.64585
Iteration 950: error is 0.64585
Iteration 960: error is 0.64585
Iteration 970: error is 0.64585
Iteration 980: error is 0.64585
Iteration 990: error is 0.64585
Iteration 1000: error is 0.64585
J_new = 0.8372
J_new = 0.8192
J_new = 0.8171
J_new = 0.8161
J_new = 0.8139
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
```

```
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.099
Iteration 20: error is 38.1897
Iteration 30: error is 37.1084
Iteration 40: error is 36.9637
Iteration 50: error is 37.5701
Iteration 60: error is 37.3491
Iteration 70: error is 36.7932
Iteration 80: error is 37.4949
Iteration 90: error is 37.5706
Iteration 100: error is 2.2601
Iteration 110: error is 1.1809
Iteration 120: error is 0.79624
Iteration 130: error is 0.69692
Iteration 140: error is 0.68058
Iteration 150: error is 0.67116
Iteration 160: error is 0.66443
Iteration 170: error is 0.65965
Iteration 180: error is 0.65607
Iteration 190: error is 0.65332
Iteration 200: error is 0.65116
Iteration 210: error is 0.64937
Iteration 220: error is 0.64793
Iteration 230: error is 0.64677
Iteration 240: error is 0.64568
Iteration 250: error is 0.64475
Iteration 260: error is 0.64335
Iteration 270: error is 0.64186
Iteration 280: error is 0.64079
Iteration 290: error is 0.63993
Iteration 300: error is 0.63932
Iteration 310: error is 0.63883
Iteration 320: error is 0.63843
Iteration 330: error is 0.63811
Iteration 340: error is 0.63785
Iteration 350: error is 0.63764
Iteration 360: error is 0.63747
Iteration 370: error is 0.63733
Iteration 380: error is 0.63722
Iteration 390: error is 0.63712
Iteration 400: error is 0.63703
Iteration 410: error is 0.63696
Iteration 420: error is 0.6369
Iteration 430: error is 0.63685
Iteration 440: error is 0.6368
Iteration 450: error is 0.63676
Iteration 460: error is 0.63673
Iteration 470: error is 0.6367
Iteration 480: error is 0.63667
Iteration 490: error is 0.63665
Iteration 500: error is 0.63663
Iteration 510: error is 0.63661
Iteration 520: error is 0.6366
Iteration 530: error is 0.63659
Iteration 540: error is 0.63657
Iteration 550: error is 0.63656
Iteration 560: error is 0.63655
Iteration 570: error is 0.63655
Iteration 580: error is 0.63654
Iteration 590: error is 0.63653
Iteration 600: error is 0.63653
```

```
Iteration 610: error is 0.63652
Iteration 620: error is 0.63652
Iteration 630: error is 0.63651
Iteration 640: error is 0.63651
Iteration 650: error is 0.63651
Iteration 660: error is 0.6365
Iteration 670: error is 0.6365
Iteration 680: error is 0.6365
Iteration 690: error is 0.6365
Iteration 700: error is 0.63649
Iteration 710: error is 0.63649
Iteration 720: error is 0.63649
Iteration 730: error is 0.63649
Iteration 740: error is 0.63649
Iteration 750: error is 0.63649
Iteration 760: error is 0.63649
Iteration 770: error is 0.63649
Iteration 780: error is 0.63648
Iteration 790: error is 0.63648
Iteration 800: error is 0.63648
Iteration 810: error is 0.63648
Iteration 820: error is 0.63648
Iteration 830: error is 0.63648
Iteration 840: error is 0.63648
Iteration 850: error is 0.63648
Iteration 860: error is 0.63648
Iteration 870: error is 0.63648
Iteration 880: error is 0.63648
Iteration 890: error is 0.63648
Iteration 900: error is 0.63648
Iteration 910: error is 0.63648
Iteration 920: error is 0.63648
Iteration 930: error is 0.63648
Iteration 940: error is 0.63648
Iteration 950: error is 0.63648
Iteration 960: error is 0.63648
Iteration 970: error is 0.63648
Iteration 980: error is 0.63648
Iteration 990: error is 0.63648
Iteration 1000: error is 0.63648
J_new = 0.8898
J_new = 0.8738
J_new = 0.8500
J_new = 0.8326
J_new = 0.8245
J_new = 0.8240
J_new = 0.8239
J_new = 0.8226
J_new = 0.8234
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4051
Iteration 20: error is 37.2066
Iteration 30: error is 36.7215
Iteration 40: error is 37.2066
Iteration 50: error is 37.7491
Iteration 60: error is 38.0151
Iteration 70: error is 37.5547
Iteration 80: error is 37.7486
Iteration 90: error is 37.75
Iteration 100: error is 2.4012
Iteration 110: error is 1.4425
Iteration 120: error is 0.99148
Iteration 130: error is 0.84039
```

Iteration 140: error is 0.77529
Iteration 150: error is 0.73863
Iteration 160: error is 0.67425
Iteration 170: error is 0.66346
Iteration 180: error is 0.65892
Iteration 190: error is 0.65591
Iteration 200: error is 0.65366
Iteration 210: error is 0.65185
Iteration 220: error is 0.65043
Iteration 230: error is 0.64914
Iteration 240: error is 0.64818
Iteration 250: error is 0.64722
Iteration 260: error is 0.64583
Iteration 270: error is 0.6443
Iteration 280: error is 0.64321
Iteration 290: error is 0.6424
Iteration 300: error is 0.64178
Iteration 310: error is 0.64129
Iteration 320: error is 0.64091
Iteration 330: error is 0.64061
Iteration 340: error is 0.64037
Iteration 350: error is 0.64017
Iteration 360: error is 0.64
Iteration 370: error is 0.63986
Iteration 380: error is 0.63974
Iteration 390: error is 0.63964
Iteration 400: error is 0.63956
Iteration 410: error is 0.6395
Iteration 420: error is 0.63943
Iteration 430: error is 0.63938
Iteration 440: error is 0.63933
Iteration 450: error is 0.63929
Iteration 460: error is 0.63926
Iteration 470: error is 0.63923
Iteration 480: error is 0.6392
Iteration 490: error is 0.63918
Iteration 500: error is 0.63916
Iteration 510: error is 0.63914
Iteration 520: error is 0.63912
Iteration 530: error is 0.63911
Iteration 540: error is 0.63909
Iteration 550: error is 0.63908
Iteration 560: error is 0.63907
Iteration 570: error is 0.63906
Iteration 580: error is 0.63906
Iteration 590: error is 0.63905
Iteration 600: error is 0.63904
Iteration 610: error is 0.63904
Iteration 620: error is 0.63903
Iteration 630: error is 0.63903
Iteration 640: error is 0.63902
Iteration 650: error is 0.63902
Iteration 660: error is 0.63902
Iteration 670: error is 0.63901
Iteration 680: error is 0.63901
Iteration 690: error is 0.63901
Iteration 700: error is 0.639
Iteration 710: error is 0.639
Iteration 720: error is 0.639
Iteration 730: error is 0.639
Iteration 740: error is 0.639
Iteration 750: error is 0.639
Iteration 760: error is 0.63899
Iteration 770: error is 0.63899
Iteration 780: error is 0.63899

```
Iteration 790: error is 0.63899
Iteration 800: error is 0.63899
Iteration 810: error is 0.63899
Iteration 820: error is 0.63899
Iteration 830: error is 0.63899
Iteration 840: error is 0.63899
Iteration 850: error is 0.63899
Iteration 860: error is 0.63899
Iteration 870: error is 0.63899
Iteration 880: error is 0.63899
Iteration 890: error is 0.63898
Iteration 900: error is 0.63898
Iteration 910: error is 0.63898
Iteration 920: error is 0.63898
Iteration 930: error is 0.63898
Iteration 940: error is 0.63898
Iteration 950: error is 0.63898
Iteration 960: error is 0.63898
Iteration 970: error is 0.63898
Iteration 980: error is 0.63898
Iteration 990: error is 0.63898
Iteration 1000: error is 0.63898
J_new = 0.8431
J_new = 0.8276
J_new = 0.8180
J_new = 0.8160
J_new = 0.8158
J_new = 0.8134
J_new = 0.8117
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0418
Iteration 20: error is 37.1782
Iteration 30: error is 36.8972
Iteration 40: error is 37.4132
Iteration 50: error is 37.0167
Iteration 60: error is 37.1655
Iteration 70: error is 37.243
Iteration 80: error is 37.77
Iteration 90: error is 37.6078
Iteration 100: error is 2.2541
Iteration 110: error is 1.4263
Iteration 120: error is 0.92412
Iteration 130: error is 0.77345
Iteration 140: error is 0.72946
Iteration 150: error is 0.70332
Iteration 160: error is 0.68085
Iteration 170: error is 0.67157
Iteration 180: error is 0.66806
Iteration 190: error is 0.66523
Iteration 200: error is 0.66312
Iteration 210: error is 0.6613
Iteration 220: error is 0.65991
Iteration 230: error is 0.6586
Iteration 240: error is 0.65757
Iteration 250: error is 0.65669
```

Iteration 260: error is 0.65523
Iteration 270: error is 0.6537
Iteration 280: error is 0.65256
Iteration 290: error is 0.6517
Iteration 300: error is 0.65106
Iteration 310: error is 0.65057
Iteration 320: error is 0.65016
Iteration 330: error is 0.64984
Iteration 340: error is 0.64957
Iteration 350: error is 0.64935
Iteration 360: error is 0.64917
Iteration 370: error is 0.64902
Iteration 380: error is 0.64889
Iteration 390: error is 0.64878
Iteration 400: error is 0.64869
Iteration 410: error is 0.6486
Iteration 420: error is 0.64853
Iteration 430: error is 0.64847
Iteration 440: error is 0.64841
Iteration 450: error is 0.64836
Iteration 460: error is 0.64832
Iteration 470: error is 0.64828
Iteration 480: error is 0.64825
Iteration 490: error is 0.64822
Iteration 500: error is 0.64819
Iteration 510: error is 0.64816
Iteration 520: error is 0.64814
Iteration 530: error is 0.64812
Iteration 540: error is 0.6481
Iteration 550: error is 0.64808
Iteration 560: error is 0.64806
Iteration 570: error is 0.64805
Iteration 580: error is 0.64803
Iteration 590: error is 0.64802
Iteration 600: error is 0.64801
Iteration 610: error is 0.648
Iteration 620: error is 0.64799
Iteration 630: error is 0.64798
Iteration 640: error is 0.64797
Iteration 650: error is 0.64796
Iteration 660: error is 0.64795
Iteration 670: error is 0.64795
Iteration 680: error is 0.64794
Iteration 690: error is 0.64793
Iteration 700: error is 0.64793
Iteration 710: error is 0.64792
Iteration 720: error is 0.64792
Iteration 730: error is 0.64791
Iteration 740: error is 0.64791
Iteration 750: error is 0.6479
Iteration 760: error is 0.6479
Iteration 770: error is 0.6479
Iteration 780: error is 0.64789
Iteration 790: error is 0.64789
Iteration 800: error is 0.64789
Iteration 810: error is 0.64788
Iteration 820: error is 0.64788
Iteration 830: error is 0.64788
Iteration 840: error is 0.64788
Iteration 850: error is 0.64787
Iteration 860: error is 0.64787
Iteration 870: error is 0.64787
Iteration 880: error is 0.64787
Iteration 890: error is 0.64786
Iteration 900: error is 0.64786

```
Iteration 910: error is 0.64786
Iteration 920: error is 0.64786
Iteration 930: error is 0.64786
Iteration 940: error is 0.64786
Iteration 950: error is 0.64785
Iteration 960: error is 0.64785
Iteration 970: error is 0.64785
Iteration 980: error is 0.64785
Iteration 990: error is 0.64785
Iteration 1000: error is 0.64785
J_new = 0.8331
J_new = 0.8174
J_new = 0.8140
J_new = 0.8122
J_new = 0.8088
J_new = 0.8064
J_new = 0.7997
J_new = 0.7860
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9118
Iteration 20: error is 36.9312
Iteration 30: error is 37.2443
Iteration 40: error is 37.1057
Iteration 50: error is 37.148
Iteration 60: error is 37.0857
Iteration 70: error is 37.5898
Iteration 80: error is 37.4517
Iteration 90: error is 37.5601
Iteration 100: error is 2.1456
Iteration 110: error is 1.3633
Iteration 120: error is 0.89527
Iteration 130: error is 0.76854
Iteration 140: error is 0.72765
Iteration 150: error is 0.67636
Iteration 160: error is 0.66633
Iteration 170: error is 0.66168
Iteration 180: error is 0.65837
Iteration 190: error is 0.65587
Iteration 200: error is 0.65382
Iteration 210: error is 0.65211
Iteration 220: error is 0.65073
Iteration 230: error is 0.64959
Iteration 240: error is 0.64865
Iteration 250: error is 0.64783
Iteration 260: error is 0.64655
Iteration 270: error is 0.6452
Iteration 280: error is 0.6442
Iteration 290: error is 0.64345
Iteration 300: error is 0.64286
Iteration 310: error is 0.64242
Iteration 320: error is 0.64208
Iteration 330: error is 0.6418
Iteration 340: error is 0.64158
Iteration 350: error is 0.64141
Iteration 360: error is 0.64126
Iteration 370: error is 0.64114
Iteration 380: error is 0.64103
Iteration 390: error is 0.64095
Iteration 400: error is 0.64087
Iteration 410: error is 0.64081
Iteration 420: error is 0.64076
```

```
Iteration 430: error is 0.64071
Iteration 440: error is 0.64067
Iteration 450: error is 0.64064
Iteration 460: error is 0.6406
Iteration 470: error is 0.64056
Iteration 480: error is 0.6405
Iteration 490: error is 0.64042
Iteration 500: error is 0.64034
Iteration 510: error is 0.64032
Iteration 520: error is 0.6403
Iteration 530: error is 0.64029
Iteration 540: error is 0.64028
Iteration 550: error is 0.64027
Iteration 560: error is 0.64026
Iteration 570: error is 0.64026
Iteration 580: error is 0.64025
Iteration 590: error is 0.64024
Iteration 600: error is 0.64024
Iteration 610: error is 0.64023
Iteration 620: error is 0.64023
Iteration 630: error is 0.64022
Iteration 640: error is 0.64022
Iteration 650: error is 0.64022
Iteration 660: error is 0.64021
Iteration 670: error is 0.64021
Iteration 680: error is 0.64021
Iteration 690: error is 0.64021
Iteration 700: error is 0.64021
Iteration 710: error is 0.6402
Iteration 720: error is 0.6402
Iteration 730: error is 0.6402
Iteration 740: error is 0.6402
Iteration 750: error is 0.6402
Iteration 760: error is 0.6402
Iteration 770: error is 0.6402
Iteration 780: error is 0.6402
Iteration 790: error is 0.6402
Iteration 800: error is 0.6402
Iteration 810: error is 0.64019
Iteration 820: error is 0.64019
Iteration 830: error is 0.64019
Iteration 840: error is 0.64019
Iteration 850: error is 0.64019
Iteration 860: error is 0.64019
Iteration 870: error is 0.64019
Iteration 880: error is 0.64019
Iteration 890: error is 0.64019
Iteration 900: error is 0.64019
Iteration 910: error is 0.64019
Iteration 920: error is 0.64019
Iteration 930: error is 0.64019
Iteration 940: error is 0.64019
Iteration 950: error is 0.64019
Iteration 960: error is 0.64019
Iteration 970: error is 0.64019
Iteration 980: error is 0.64019
Iteration 990: error is 0.64019
Iteration 1000: error is 0.64019
J_new = 0.8431
J_new = 0.8272
J_new = 0.8170
J_new = 0.8154
J_new = 0.8148
J_new = 0.8112
J_new = 0.8090
```

```
J_new = 0.8056
J_new = 0.8034
J_new = 0.7900
J_new = 0.7823
J_new = 0.7422
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.8651
Iteration 20: error is 37.0572
Iteration 30: error is 36.9058
Iteration 40: error is 36.739
Iteration 50: error is 36.8609
Iteration 60: error is 36.9843
Iteration 70: error is 36.4582
Iteration 80: error is 36.617
Iteration 90: error is 36.6478
Iteration 100: error is 2.2117
Iteration 110: error is 1.2289
Iteration 120: error is 0.77205
Iteration 130: error is 0.72284
Iteration 140: error is 0.70596
Iteration 150: error is 0.68494
Iteration 160: error is 0.67009
Iteration 170: error is 0.66434
Iteration 180: error is 0.66011
Iteration 190: error is 0.6571
Iteration 200: error is 0.65431
Iteration 210: error is 0.65234
Iteration 220: error is 0.65063
Iteration 230: error is 0.64928
Iteration 240: error is 0.64812
Iteration 250: error is 0.64713
Iteration 260: error is 0.64568
Iteration 270: error is 0.6439
Iteration 280: error is 0.64276
Iteration 290: error is 0.64194
Iteration 300: error is 0.64131
Iteration 310: error is 0.64081
Iteration 320: error is 0.64043
Iteration 330: error is 0.64012
Iteration 340: error is 0.63987
Iteration 350: error is 0.63967
Iteration 360: error is 0.6395
Iteration 370: error is 0.63937
Iteration 380: error is 0.63925
Iteration 390: error is 0.63916
Iteration 400: error is 0.63907
Iteration 410: error is 0.639
Iteration 420: error is 0.63894
Iteration 430: error is 0.63889
Iteration 440: error is 0.63884
Iteration 450: error is 0.63881
Iteration 460: error is 0.63877
Iteration 470: error is 0.63874
Iteration 480: error is 0.63872
Iteration 490: error is 0.6387
Iteration 500: error is 0.63868
Iteration 510: error is 0.63866
Iteration 520: error is 0.63864
Iteration 530: error is 0.63863
Iteration 540: error is 0.63862
Iteration 550: error is 0.63861
Iteration 560: error is 0.6386
```

```
Iteration 570: error is 0.6386
Iteration 580: error is 0.63859
Iteration 590: error is 0.63858
Iteration 600: error is 0.63858
Iteration 610: error is 0.63857
Iteration 620: error is 0.63857
Iteration 630: error is 0.63856
Iteration 640: error is 0.63855
Iteration 650: error is 0.63852
Iteration 660: error is 0.63851
Iteration 670: error is 0.63851
Iteration 680: error is 0.6385
Iteration 690: error is 0.6385
Iteration 700: error is 0.6385
Iteration 710: error is 0.63849
Iteration 720: error is 0.63849
Iteration 730: error is 0.63849
Iteration 740: error is 0.63849
Iteration 750: error is 0.63849
Iteration 760: error is 0.63848
Iteration 770: error is 0.63848
Iteration 780: error is 0.63848
Iteration 790: error is 0.63848
Iteration 800: error is 0.63848
Iteration 810: error is 0.63848
Iteration 820: error is 0.63848
Iteration 830: error is 0.63848
Iteration 840: error is 0.63848
Iteration 850: error is 0.63848
Iteration 860: error is 0.63848
Iteration 870: error is 0.63848
Iteration 880: error is 0.63848
Iteration 890: error is 0.63847
Iteration 900: error is 0.63847
Iteration 910: error is 0.63847
Iteration 920: error is 0.63847
Iteration 930: error is 0.63847
Iteration 940: error is 0.63847
Iteration 950: error is 0.63847
Iteration 960: error is 0.63847
Iteration 970: error is 0.63847
Iteration 980: error is 0.63847
Iteration 990: error is 0.63847
Iteration 1000: error is 0.63847
J_new = 0.8540
J_new = 0.8286
J_new = 0.8184
J_new = 0.8164
J_new = 0.8160
J_new = 0.8138
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.5709
Iteration 20: error is 36.8363
Iteration 30: error is 36.8701
```

Iteration 40: error is 37.0065
Iteration 50: error is 37.5598
Iteration 60: error is 37.1529
Iteration 70: error is 37.3826
Iteration 80: error is 37.5491
Iteration 90: error is 37.1911
Iteration 100: error is 2.1331
Iteration 110: error is 1.2846
Iteration 120: error is 0.87898
Iteration 130: error is 0.7194
Iteration 140: error is 0.68153
Iteration 150: error is 0.66611
Iteration 160: error is 0.65935
Iteration 170: error is 0.65414
Iteration 180: error is 0.65006
Iteration 190: error is 0.64687
Iteration 200: error is 0.64458
Iteration 210: error is 0.64265
Iteration 220: error is 0.64103
Iteration 230: error is 0.63966
Iteration 240: error is 0.63856
Iteration 250: error is 0.63769
Iteration 260: error is 0.63626
Iteration 270: error is 0.63476
Iteration 280: error is 0.63368
Iteration 290: error is 0.63291
Iteration 300: error is 0.63231
Iteration 310: error is 0.63185
Iteration 320: error is 0.63148
Iteration 330: error is 0.63118
Iteration 340: error is 0.63094
Iteration 350: error is 0.63075
Iteration 360: error is 0.6306
Iteration 370: error is 0.63047
Iteration 380: error is 0.63036
Iteration 390: error is 0.63027
Iteration 400: error is 0.63019
Iteration 410: error is 0.63013
Iteration 420: error is 0.63007
Iteration 430: error is 0.63002
Iteration 440: error is 0.62998
Iteration 450: error is 0.62995
Iteration 460: error is 0.62991
Iteration 470: error is 0.62989
Iteration 480: error is 0.62987
Iteration 490: error is 0.62985
Iteration 500: error is 0.62983
Iteration 510: error is 0.62981
Iteration 520: error is 0.6298
Iteration 530: error is 0.62979
Iteration 540: error is 0.62978
Iteration 550: error is 0.62977
Iteration 560: error is 0.62976
Iteration 570: error is 0.62976
Iteration 580: error is 0.62975
Iteration 590: error is 0.62974
Iteration 600: error is 0.62974
Iteration 610: error is 0.62973
Iteration 620: error is 0.62973
Iteration 630: error is 0.62973
Iteration 640: error is 0.62972
Iteration 650: error is 0.62972
Iteration 660: error is 0.62972
Iteration 670: error is 0.62972
Iteration 680: error is 0.62972

```
Iteration 690: error is 0.62971
Iteration 700: error is 0.62971
Iteration 710: error is 0.62971
Iteration 720: error is 0.62971
Iteration 730: error is 0.62971
Iteration 740: error is 0.62971
Iteration 750: error is 0.62971
Iteration 760: error is 0.62971
Iteration 770: error is 0.62971
Iteration 780: error is 0.62971
Iteration 790: error is 0.62971
Iteration 800: error is 0.6297
Iteration 810: error is 0.6297
Iteration 820: error is 0.6297
Iteration 830: error is 0.6297
Iteration 840: error is 0.6297
Iteration 850: error is 0.6297
Iteration 860: error is 0.6297
Iteration 870: error is 0.6297
Iteration 880: error is 0.6297
Iteration 890: error is 0.6297
Iteration 900: error is 0.6297
Iteration 910: error is 0.6297
Iteration 920: error is 0.6297
Iteration 930: error is 0.6297
Iteration 940: error is 0.6297
Iteration 950: error is 0.6297
Iteration 960: error is 0.6297
Iteration 970: error is 0.6297
Iteration 980: error is 0.6297
Iteration 990: error is 0.6297
Iteration 1000: error is 0.6297
J_new = 0.8079
J_new = 0.7957
J_new = 0.7773
J_new = 0.7616
J_new = 0.7529
J_new = 0.7450
J_new = 0.7449
J_new = 0.7456
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9924
Iteration 20: error is 37.3447
Iteration 30: error is 36.7011
Iteration 40: error is 36.922
Iteration 50: error is 37.5165
Iteration 60: error is 37.3932
Iteration 70: error is 37.4356
Iteration 80: error is 37.8052
Iteration 90: error is 38.1366
Iteration 100: error is 2.2795
Iteration 110: error is 1.3452
Iteration 120: error is 0.89213
Iteration 130: error is 0.78958
Iteration 140: error is 0.71249
Iteration 150: error is 0.66963
Iteration 160: error is 0.6633
Iteration 170: error is 0.6589
Iteration 180: error is 0.6557
Iteration 190: error is 0.65315
Iteration 200: error is 0.65104
Iteration 210: error is 0.64933
Iteration 220: error is 0.64794
```

Iteration 230: error is 0.64678
Iteration 240: error is 0.64577
Iteration 250: error is 0.64501
Iteration 260: error is 0.64358
Iteration 270: error is 0.64214
Iteration 280: error is 0.64109
Iteration 290: error is 0.64032
Iteration 300: error is 0.6397
Iteration 310: error is 0.63921
Iteration 320: error is 0.63884
Iteration 330: error is 0.63854
Iteration 340: error is 0.6383
Iteration 350: error is 0.63811
Iteration 360: error is 0.63794
Iteration 370: error is 0.6378
Iteration 380: error is 0.63769
Iteration 390: error is 0.6376
Iteration 400: error is 0.63752
Iteration 410: error is 0.63745
Iteration 420: error is 0.63739
Iteration 430: error is 0.63734
Iteration 440: error is 0.6373
Iteration 450: error is 0.63726
Iteration 460: error is 0.63723
Iteration 470: error is 0.6372
Iteration 480: error is 0.63717
Iteration 490: error is 0.63715
Iteration 500: error is 0.63713
Iteration 510: error is 0.63711
Iteration 520: error is 0.6371
Iteration 530: error is 0.63709
Iteration 540: error is 0.63708
Iteration 550: error is 0.63707
Iteration 560: error is 0.63706
Iteration 570: error is 0.63705
Iteration 580: error is 0.63704
Iteration 590: error is 0.63704
Iteration 600: error is 0.63703
Iteration 610: error is 0.63703
Iteration 620: error is 0.63702
Iteration 630: error is 0.63702
Iteration 640: error is 0.63701
Iteration 650: error is 0.63701
Iteration 660: error is 0.63701
Iteration 670: error is 0.63701
Iteration 680: error is 0.637
Iteration 690: error is 0.63699
Iteration 700: error is 0.63699
Iteration 710: error is 0.63698
Iteration 720: error is 0.63698
Iteration 730: error is 0.63698
Iteration 740: error is 0.63698
Iteration 750: error is 0.63698
Iteration 760: error is 0.63698
Iteration 770: error is 0.63698
Iteration 780: error is 0.63698
Iteration 790: error is 0.63698
Iteration 800: error is 0.63697
Iteration 810: error is 0.63697
Iteration 820: error is 0.63697
Iteration 830: error is 0.63697
Iteration 840: error is 0.63697
Iteration 850: error is 0.63697
Iteration 860: error is 0.63697
Iteration 870: error is 0.63697

```
Iteration 880: error is 0.63697
Iteration 890: error is 0.63697
Iteration 900: error is 0.63697
Iteration 910: error is 0.63697
Iteration 920: error is 0.63697
Iteration 930: error is 0.63697
Iteration 940: error is 0.63697
Iteration 950: error is 0.63697
Iteration 960: error is 0.63697
Iteration 970: error is 0.63697
Iteration 980: error is 0.63697
Iteration 990: error is 0.63697
Iteration 1000: error is 0.63697
J_new = 0.8317
J_new = 0.8183
J_new = 0.8142
J_new = 0.8124
J_new = 0.8090
J_new = 0.8067
J_new = 0.7999
J_new = 0.7862
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.3667
Iteration 20: error is 37.3814
Iteration 30: error is 37.2769
Iteration 40: error is 37.1683
Iteration 50: error is 37.5463
Iteration 60: error is 37.7897
Iteration 70: error is 38.3422
Iteration 80: error is 38.2968
Iteration 90: error is 37.9269
Iteration 100: error is 2.4464
Iteration 110: error is 1.4068
Iteration 120: error is 0.99317
Iteration 130: error is 0.84336
Iteration 140: error is 0.76466
Iteration 150: error is 0.68677
Iteration 160: error is 0.65943
Iteration 170: error is 0.65528
Iteration 180: error is 0.65237
Iteration 190: error is 0.65008
Iteration 200: error is 0.64824
Iteration 210: error is 0.64668
Iteration 220: error is 0.64533
Iteration 230: error is 0.64416
Iteration 240: error is 0.64328
Iteration 250: error is 0.64249
Iteration 260: error is 0.64122
Iteration 270: error is 0.63986
Iteration 280: error is 0.63885
Iteration 290: error is 0.63808
Iteration 300: error is 0.63751
Iteration 310: error is 0.63707
Iteration 320: error is 0.63671
Iteration 330: error is 0.63643
Iteration 340: error is 0.6362
Iteration 350: error is 0.63602
Iteration 360: error is 0.63587
Iteration 370: error is 0.63574
Iteration 380: error is 0.63564
Iteration 390: error is 0.63555
```

```
Iteration 400: error is 0.63548
Iteration 410: error is 0.63541
Iteration 420: error is 0.63536
Iteration 430: error is 0.63531
Iteration 440: error is 0.63527
Iteration 450: error is 0.63524
Iteration 460: error is 0.63521
Iteration 470: error is 0.63518
Iteration 480: error is 0.63516
Iteration 490: error is 0.63514
Iteration 500: error is 0.63512
Iteration 510: error is 0.6351
Iteration 520: error is 0.63509
Iteration 530: error is 0.63508
Iteration 540: error is 0.63507
Iteration 550: error is 0.63506
Iteration 560: error is 0.63505
Iteration 570: error is 0.63504
Iteration 580: error is 0.63504
Iteration 590: error is 0.63503
Iteration 600: error is 0.63503
Iteration 610: error is 0.63502
Iteration 620: error is 0.63502
Iteration 630: error is 0.63502
Iteration 640: error is 0.63501
Iteration 650: error is 0.63501
Iteration 660: error is 0.63501
Iteration 670: error is 0.635
Iteration 680: error is 0.635
Iteration 690: error is 0.635
Iteration 700: error is 0.635
Iteration 710: error is 0.635
Iteration 720: error is 0.635
Iteration 730: error is 0.635
Iteration 740: error is 0.63499
Iteration 750: error is 0.63499
Iteration 760: error is 0.63499
Iteration 770: error is 0.63499
Iteration 780: error is 0.63499
Iteration 790: error is 0.63499
Iteration 800: error is 0.63499
Iteration 810: error is 0.63499
Iteration 820: error is 0.63499
Iteration 830: error is 0.63499
Iteration 840: error is 0.63499
Iteration 850: error is 0.63499
Iteration 860: error is 0.63499
Iteration 870: error is 0.63499
Iteration 880: error is 0.63499
Iteration 890: error is 0.63499
Iteration 900: error is 0.63499
Iteration 910: error is 0.63499
Iteration 920: error is 0.63499
Iteration 930: error is 0.63499
Iteration 940: error is 0.63499
Iteration 950: error is 0.63499
Iteration 960: error is 0.63499
Iteration 970: error is 0.63499
Iteration 980: error is 0.63499
Iteration 990: error is 0.63499
Iteration 1000: error is 0.63499
J_new = 0.8445
J_new = 0.8288
J_new = 0.8180
J_new = 0.8162
```

```
J_new = 0.8159
J_new = 0.8135
J_new = 0.8116
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.3972
Iteration 20: error is 37.1465
Iteration 30: error is 36.9894
Iteration 40: error is 37.5889
Iteration 50: error is 37.4417
Iteration 60: error is 37.6505
Iteration 70: error is 37.0782
Iteration 80: error is 37.1591
Iteration 90: error is 37.7285
Iteration 100: error is 2.2748
Iteration 110: error is 1.2969
Iteration 120: error is 0.90917
Iteration 130: error is 0.81615
Iteration 140: error is 0.75766
Iteration 150: error is 0.69252
Iteration 160: error is 0.66306
Iteration 170: error is 0.65649
Iteration 180: error is 0.65297
Iteration 190: error is 0.6502
Iteration 200: error is 0.64755
Iteration 210: error is 0.64565
Iteration 220: error is 0.64413
Iteration 230: error is 0.64288
Iteration 240: error is 0.64178
Iteration 250: error is 0.64089
Iteration 260: error is 0.63939
Iteration 270: error is 0.63778
Iteration 280: error is 0.63662
Iteration 290: error is 0.63578
Iteration 300: error is 0.63513
Iteration 310: error is 0.63463
Iteration 320: error is 0.63426
Iteration 330: error is 0.63395
Iteration 340: error is 0.63369
Iteration 350: error is 0.63348
Iteration 360: error is 0.63331
Iteration 370: error is 0.63317
Iteration 380: error is 0.63304
Iteration 390: error is 0.63294
Iteration 400: error is 0.63285
Iteration 410: error is 0.63278
Iteration 420: error is 0.63271
Iteration 430: error is 0.63266
Iteration 440: error is 0.63261
Iteration 450: error is 0.63257
Iteration 460: error is 0.63253
Iteration 470: error is 0.6325
Iteration 480: error is 0.63247
Iteration 490: error is 0.63244
Iteration 500: error is 0.63242
Iteration 510: error is 0.6324
```

```
Iteration 520: error is 0.63239
Iteration 530: error is 0.63237
Iteration 540: error is 0.63236
Iteration 550: error is 0.63234
Iteration 560: error is 0.63233
Iteration 570: error is 0.63232
Iteration 580: error is 0.63232
Iteration 590: error is 0.63231
Iteration 600: error is 0.6323
Iteration 610: error is 0.6323
Iteration 620: error is 0.63229
Iteration 630: error is 0.63229
Iteration 640: error is 0.63228
Iteration 650: error is 0.63228
Iteration 660: error is 0.63227
Iteration 670: error is 0.63227
Iteration 680: error is 0.63227
Iteration 690: error is 0.63227
Iteration 700: error is 0.63226
Iteration 710: error is 0.63226
Iteration 720: error is 0.63226
Iteration 730: error is 0.63226
Iteration 740: error is 0.63226
Iteration 750: error is 0.63226
Iteration 760: error is 0.63225
Iteration 770: error is 0.63225
Iteration 780: error is 0.63225
Iteration 790: error is 0.63225
Iteration 800: error is 0.63225
Iteration 810: error is 0.63225
Iteration 820: error is 0.63225
Iteration 830: error is 0.63225
Iteration 840: error is 0.63225
Iteration 850: error is 0.63225
Iteration 860: error is 0.63225
Iteration 870: error is 0.63225
Iteration 880: error is 0.63225
Iteration 890: error is 0.63225
Iteration 900: error is 0.63225
Iteration 910: error is 0.63224
Iteration 920: error is 0.63224
Iteration 930: error is 0.63224
Iteration 940: error is 0.63224
Iteration 950: error is 0.63224
Iteration 960: error is 0.63224
Iteration 970: error is 0.63224
Iteration 980: error is 0.63224
Iteration 990: error is 0.63224
Iteration 1000: error is 0.63224
J_new = 0.8345
J_new = 0.8190
J_new = 0.8162
J_new = 0.8152
J_new = 0.8109
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6872
```

Iteration 20: error is 37.1874
Iteration 30: error is 37.2847
Iteration 40: error is 36.592
Iteration 50: error is 37.0542
Iteration 60: error is 37.4377
Iteration 70: error is 37.7104
Iteration 80: error is 37.4039
Iteration 90: error is 37.2774
Iteration 100: error is 2.2873
Iteration 110: error is 1.026
Iteration 120: error is 0.74959
Iteration 130: error is 0.70014
Iteration 140: error is 0.68382
Iteration 150: error is 0.67353
Iteration 160: error is 0.66687
Iteration 170: error is 0.66187
Iteration 180: error is 0.65812
Iteration 190: error is 0.65513
Iteration 200: error is 0.65282
Iteration 210: error is 0.65088
Iteration 220: error is 0.64932
Iteration 230: error is 0.64803
Iteration 240: error is 0.64691
Iteration 250: error is 0.64592
Iteration 260: error is 0.6444
Iteration 270: error is 0.64274
Iteration 280: error is 0.64154
Iteration 290: error is 0.64066
Iteration 300: error is 0.64
Iteration 310: error is 0.63948
Iteration 320: error is 0.63908
Iteration 330: error is 0.63875
Iteration 340: error is 0.63848
Iteration 350: error is 0.63827
Iteration 360: error is 0.63809
Iteration 370: error is 0.63795
Iteration 380: error is 0.63782
Iteration 390: error is 0.63771
Iteration 400: error is 0.63762
Iteration 410: error is 0.63754
Iteration 420: error is 0.63748
Iteration 430: error is 0.63742
Iteration 440: error is 0.63737
Iteration 450: error is 0.63733
Iteration 460: error is 0.63729
Iteration 470: error is 0.63726
Iteration 480: error is 0.63723
Iteration 490: error is 0.6372
Iteration 500: error is 0.63718
Iteration 510: error is 0.63716
Iteration 520: error is 0.63714
Iteration 530: error is 0.63713
Iteration 540: error is 0.63711
Iteration 550: error is 0.6371
Iteration 560: error is 0.63709
Iteration 570: error is 0.63708
Iteration 580: error is 0.63707
Iteration 590: error is 0.63707
Iteration 600: error is 0.63706
Iteration 610: error is 0.63705
Iteration 620: error is 0.63705
Iteration 630: error is 0.63704
Iteration 640: error is 0.63704
Iteration 650: error is 0.63704
Iteration 660: error is 0.63703

```
Iteration 670: error is 0.63703
Iteration 680: error is 0.63703
Iteration 690: error is 0.63702
Iteration 700: error is 0.63702
Iteration 710: error is 0.63702
Iteration 720: error is 0.63702
Iteration 730: error is 0.63702
Iteration 740: error is 0.63702
Iteration 750: error is 0.63701
Iteration 760: error is 0.63701
Iteration 770: error is 0.63701
Iteration 780: error is 0.63701
Iteration 790: error is 0.63701
Iteration 800: error is 0.63701
Iteration 810: error is 0.63701
Iteration 820: error is 0.63701
Iteration 830: error is 0.63701
Iteration 840: error is 0.63701
Iteration 850: error is 0.63701
Iteration 860: error is 0.63701
Iteration 870: error is 0.63701
Iteration 880: error is 0.63701
Iteration 890: error is 0.63701
Iteration 900: error is 0.63701
Iteration 910: error is 0.63701
Iteration 920: error is 0.63701
Iteration 930: error is 0.637
Iteration 940: error is 0.637
Iteration 950: error is 0.637
Iteration 960: error is 0.637
Iteration 970: error is 0.637
Iteration 980: error is 0.637
Iteration 990: error is 0.637
Iteration 1000: error is 0.637
J_new = 0.8440
J_new = 0.8287
J_new = 0.8182
J_new = 0.8165
J_new = 0.8162
J_new = 0.8137
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6676
Iteration 20: error is 37.3248
Iteration 30: error is 36.9647
Iteration 40: error is 36.8349
Iteration 50: error is 36.725
Iteration 60: error is 36.8717
Iteration 70: error is 37.0522
Iteration 80: error is 37.5126
Iteration 90: error is 37.1538
Iteration 100: error is 2.3035
Iteration 110: error is 1.273
Iteration 120: error is 0.90283
Iteration 130: error is 0.79848
```

Iteration 140: error is 0.74969
Iteration 150: error is 0.68612
Iteration 160: error is 0.66346
Iteration 170: error is 0.6591
Iteration 180: error is 0.65585
Iteration 190: error is 0.65337
Iteration 200: error is 0.65125
Iteration 210: error is 0.64953
Iteration 220: error is 0.64811
Iteration 230: error is 0.64696
Iteration 240: error is 0.64587
Iteration 250: error is 0.64509
Iteration 260: error is 0.64365
Iteration 270: error is 0.64223
Iteration 280: error is 0.6411
Iteration 290: error is 0.64029
Iteration 300: error is 0.63965
Iteration 310: error is 0.63915
Iteration 320: error is 0.63876
Iteration 330: error is 0.63842
Iteration 340: error is 0.63813
Iteration 350: error is 0.63791
Iteration 360: error is 0.63775
Iteration 370: error is 0.6376
Iteration 380: error is 0.63748
Iteration 390: error is 0.63737
Iteration 400: error is 0.63728
Iteration 410: error is 0.6372
Iteration 420: error is 0.63714
Iteration 430: error is 0.63708
Iteration 440: error is 0.63703
Iteration 450: error is 0.63699
Iteration 460: error is 0.63695
Iteration 470: error is 0.63692
Iteration 480: error is 0.63689
Iteration 490: error is 0.63687
Iteration 500: error is 0.63685
Iteration 510: error is 0.63683
Iteration 520: error is 0.63681
Iteration 530: error is 0.6368
Iteration 540: error is 0.63678
Iteration 550: error is 0.63677
Iteration 560: error is 0.63676
Iteration 570: error is 0.63675
Iteration 580: error is 0.63674
Iteration 590: error is 0.63674
Iteration 600: error is 0.63673
Iteration 610: error is 0.63672
Iteration 620: error is 0.63672
Iteration 630: error is 0.63671
Iteration 640: error is 0.63671
Iteration 650: error is 0.63671
Iteration 660: error is 0.6367
Iteration 670: error is 0.6367
Iteration 680: error is 0.6367
Iteration 690: error is 0.63669
Iteration 700: error is 0.63669
Iteration 710: error is 0.63669
Iteration 720: error is 0.63669
Iteration 730: error is 0.63669
Iteration 740: error is 0.63668
Iteration 750: error is 0.63668
Iteration 760: error is 0.63668
Iteration 770: error is 0.63668
Iteration 780: error is 0.63668

```
Iteration 790: error is 0.63668
Iteration 800: error is 0.63668
Iteration 810: error is 0.63668
Iteration 820: error is 0.63668
Iteration 830: error is 0.63668
Iteration 840: error is 0.63667
Iteration 850: error is 0.63667
Iteration 860: error is 0.63667
Iteration 870: error is 0.63667
Iteration 880: error is 0.63667
Iteration 890: error is 0.63667
Iteration 900: error is 0.63667
Iteration 910: error is 0.63667
Iteration 920: error is 0.63667
Iteration 930: error is 0.63667
Iteration 940: error is 0.63667
Iteration 950: error is 0.63667
Iteration 960: error is 0.63667
Iteration 970: error is 0.63667
Iteration 980: error is 0.63667
Iteration 990: error is 0.63667
Iteration 1000: error is 0.63667
J_new = 0.8365
J_new = 0.8187
J_new = 0.8155
J_new = 0.8149
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8032
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8495
Iteration 20: error is 36.574
Iteration 30: error is 36.9197
Iteration 40: error is 37.0171
Iteration 50: error is 37.0223
Iteration 60: error is 37.5533
Iteration 70: error is 37.6533
Iteration 80: error is 36.9301
Iteration 90: error is 37.3047
Iteration 100: error is 2.1108
Iteration 110: error is 1.1562
Iteration 120: error is 0.88948
Iteration 130: error is 0.84051
Iteration 140: error is 0.78537
Iteration 150: error is 0.69117
Iteration 160: error is 0.66519
Iteration 170: error is 0.65828
Iteration 180: error is 0.65455
Iteration 190: error is 0.65158
Iteration 200: error is 0.64963
Iteration 210: error is 0.64803
Iteration 220: error is 0.64672
Iteration 230: error is 0.6456
Iteration 240: error is 0.64487
Iteration 250: error is 0.64386
Iteration 260: error is 0.64309
Iteration 270: error is 0.63955
Iteration 280: error is 0.63826
```

Iteration 290: error is 0.63744
Iteration 300: error is 0.63689
Iteration 310: error is 0.63641
Iteration 320: error is 0.63596
Iteration 330: error is 0.63567
Iteration 340: error is 0.63544
Iteration 350: error is 0.63525
Iteration 360: error is 0.63509
Iteration 370: error is 0.63495
Iteration 380: error is 0.63484
Iteration 390: error is 0.63475
Iteration 400: error is 0.63467
Iteration 410: error is 0.6346
Iteration 420: error is 0.63454
Iteration 430: error is 0.63449
Iteration 440: error is 0.63445
Iteration 450: error is 0.63441
Iteration 460: error is 0.63438
Iteration 470: error is 0.63435
Iteration 480: error is 0.63433
Iteration 490: error is 0.63431
Iteration 500: error is 0.63429
Iteration 510: error is 0.63427
Iteration 520: error is 0.63426
Iteration 530: error is 0.63425
Iteration 540: error is 0.63424
Iteration 550: error is 0.63423
Iteration 560: error is 0.63422
Iteration 570: error is 0.63421
Iteration 580: error is 0.63421
Iteration 590: error is 0.6342
Iteration 600: error is 0.6342
Iteration 610: error is 0.63419
Iteration 620: error is 0.63419
Iteration 630: error is 0.63418
Iteration 640: error is 0.63418
Iteration 650: error is 0.63418
Iteration 660: error is 0.63417
Iteration 670: error is 0.63417
Iteration 680: error is 0.63417
Iteration 690: error is 0.63417
Iteration 700: error is 0.63417
Iteration 710: error is 0.63417
Iteration 720: error is 0.63416
Iteration 730: error is 0.63416
Iteration 740: error is 0.63416
Iteration 750: error is 0.63416
Iteration 760: error is 0.63416
Iteration 770: error is 0.63416
Iteration 780: error is 0.63416
Iteration 790: error is 0.63416
Iteration 800: error is 0.63416
Iteration 810: error is 0.63416
Iteration 820: error is 0.63416
Iteration 830: error is 0.63415
Iteration 840: error is 0.63415
Iteration 850: error is 0.63415
Iteration 860: error is 0.63415
Iteration 870: error is 0.63415
Iteration 880: error is 0.63415
Iteration 890: error is 0.63415
Iteration 900: error is 0.63415
Iteration 910: error is 0.63415
Iteration 920: error is 0.63415
Iteration 930: error is 0.63415

```
Iteration 940: error is 0.63415
Iteration 950: error is 0.63415
Iteration 960: error is 0.63415
Iteration 970: error is 0.63415
Iteration 980: error is 0.63415
Iteration 990: error is 0.63415
Iteration 1000: error is 0.63415
J_new = 0.8368
J_new = 0.8190
J_new = 0.8159
J_new = 0.8154
J_new = 0.8111
J_new = 0.8092
J_new = 0.8054
J_new = 0.8036
J_new = 0.7898
J_new = 0.7825
J_new = 0.7420
J_new = 0.7429
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.3008
Iteration 20: error is 36.7463
Iteration 30: error is 36.9066
Iteration 40: error is 37.1682
Iteration 50: error is 37.344
Iteration 60: error is 37.6389
Iteration 70: error is 38.4718
Iteration 80: error is 37.3005
Iteration 90: error is 37.1258
Iteration 100: error is 2.2392
Iteration 110: error is 1.2075
Iteration 120: error is 0.91064
Iteration 130: error is 0.85397
Iteration 140: error is 0.82257
Iteration 150: error is 0.70778
Iteration 160: error is 0.6997
Iteration 170: error is 0.69343
Iteration 180: error is 0.69017
Iteration 190: error is 0.68753
Iteration 200: error is 0.68543
Iteration 210: error is 0.68356
Iteration 220: error is 0.68223
Iteration 230: error is 0.68124
Iteration 240: error is 0.68025
Iteration 250: error is 0.67938
Iteration 260: error is 0.67813
Iteration 270: error is 0.67678
Iteration 280: error is 0.67582
Iteration 290: error is 0.67511
Iteration 300: error is 0.67458
Iteration 310: error is 0.67417
Iteration 320: error is 0.67386
Iteration 330: error is 0.67361
Iteration 340: error is 0.67342
Iteration 350: error is 0.67326
Iteration 360: error is 0.67313
Iteration 370: error is 0.67302
Iteration 380: error is 0.67294
Iteration 390: error is 0.67286
Iteration 400: error is 0.6728
Iteration 410: error is 0.67275
Iteration 420: error is 0.67271
Iteration 430: error is 0.67268
```

```
Iteration 440: error is 0.67264
Iteration 450: error is 0.67262
Iteration 460: error is 0.6726
Iteration 470: error is 0.67258
Iteration 480: error is 0.67256
Iteration 490: error is 0.67255
Iteration 500: error is 0.67254
Iteration 510: error is 0.67253
Iteration 520: error is 0.67252
Iteration 530: error is 0.67251
Iteration 540: error is 0.6725
Iteration 550: error is 0.6725
Iteration 560: error is 0.67249
Iteration 570: error is 0.67249
Iteration 580: error is 0.67248
Iteration 590: error is 0.67248
Iteration 600: error is 0.67248
Iteration 610: error is 0.67247
Iteration 620: error is 0.67247
Iteration 630: error is 0.67247
Iteration 640: error is 0.67247
Iteration 650: error is 0.67247
Iteration 660: error is 0.67246
Iteration 670: error is 0.67246
Iteration 680: error is 0.67246
Iteration 690: error is 0.67246
Iteration 700: error is 0.67246
Iteration 710: error is 0.67246
Iteration 720: error is 0.67246
Iteration 730: error is 0.67246
Iteration 740: error is 0.67246
Iteration 750: error is 0.67246
Iteration 760: error is 0.67246
Iteration 770: error is 0.67246
Iteration 780: error is 0.67246
Iteration 790: error is 0.67246
Iteration 800: error is 0.67246
Iteration 810: error is 0.67246
Iteration 820: error is 0.67246
Iteration 830: error is 0.67246
Iteration 840: error is 0.67246
Iteration 850: error is 0.67246
Iteration 860: error is 0.67245
Iteration 870: error is 0.67245
Iteration 880: error is 0.67245
Iteration 890: error is 0.67245
Iteration 900: error is 0.67245
Iteration 910: error is 0.67245
Iteration 920: error is 0.67245
Iteration 930: error is 0.67245
Iteration 940: error is 0.67245
Iteration 950: error is 0.67245
Iteration 960: error is 0.67245
Iteration 970: error is 0.67245
Iteration 980: error is 0.67245
Iteration 990: error is 0.67245
Iteration 1000: error is 0.67245
J_new = 0.8539
J_new = 0.8209
J_new = 0.8095
J_new = 0.8062
J_new = 0.8011
J_new = 0.7853
J_new = 0.7431
J_new = 0.7416
```

```
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.11114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.9095
Iteration 20: error is 37.3471
Iteration 30: error is 36.7427
Iteration 40: error is 36.4494
Iteration 50: error is 36.7278
Iteration 60: error is 37.2611
Iteration 70: error is 37.1789
Iteration 80: error is 37.9062
Iteration 90: error is 37.4844
Iteration 100: error is 2.1484
Iteration 110: error is 1.0857
Iteration 120: error is 0.77835
Iteration 130: error is 0.70163
Iteration 140: error is 0.68192
Iteration 150: error is 0.67178
Iteration 160: error is 0.66484
Iteration 170: error is 0.65996
Iteration 180: error is 0.65631
Iteration 190: error is 0.65348
Iteration 200: error is 0.65127
Iteration 210: error is 0.64943
Iteration 220: error is 0.64793
Iteration 230: error is 0.6467
Iteration 240: error is 0.64553
Iteration 250: error is 0.64469
Iteration 260: error is 0.64327
Iteration 270: error is 0.64181
Iteration 280: error is 0.6407
Iteration 290: error is 0.63985
Iteration 300: error is 0.63922
Iteration 310: error is 0.63874
Iteration 320: error is 0.63836
Iteration 330: error is 0.63805
Iteration 340: error is 0.6378
Iteration 350: error is 0.6376
Iteration 360: error is 0.63744
Iteration 370: error is 0.6373
Iteration 380: error is 0.63719
Iteration 390: error is 0.63709
Iteration 400: error is 0.63701
Iteration 410: error is 0.63694
Iteration 420: error is 0.63688
Iteration 430: error is 0.63683
Iteration 440: error is 0.63679
Iteration 450: error is 0.63675
Iteration 460: error is 0.63672
Iteration 470: error is 0.63669
Iteration 480: error is 0.63667
Iteration 490: error is 0.63664
Iteration 500: error is 0.63662
Iteration 510: error is 0.63661
Iteration 520: error is 0.63659
Iteration 530: error is 0.63658
Iteration 540: error is 0.63657
Iteration 550: error is 0.63656
Iteration 560: error is 0.63655
Iteration 570: error is 0.63654
Iteration 580: error is 0.63654
Iteration 590: error is 0.63653
Iteration 600: error is 0.63652
Iteration 610: error is 0.63652
```

```
Iteration 620: error is 0.63652
Iteration 630: error is 0.63651
Iteration 640: error is 0.63651
Iteration 650: error is 0.63651
Iteration 660: error is 0.6365
Iteration 670: error is 0.6365
Iteration 680: error is 0.6365
Iteration 690: error is 0.6365
Iteration 700: error is 0.63649
Iteration 710: error is 0.63649
Iteration 720: error is 0.63649
Iteration 730: error is 0.63649
Iteration 740: error is 0.63649
Iteration 750: error is 0.63649
Iteration 760: error is 0.63649
Iteration 770: error is 0.63649
Iteration 780: error is 0.63648
Iteration 790: error is 0.63648
Iteration 800: error is 0.63646
Iteration 810: error is 0.63644
Iteration 820: error is 0.63644
Iteration 830: error is 0.63644
Iteration 840: error is 0.63643
Iteration 850: error is 0.63643
Iteration 860: error is 0.63643
Iteration 870: error is 0.63643
Iteration 880: error is 0.63643
Iteration 890: error is 0.63643
Iteration 900: error is 0.63643
Iteration 910: error is 0.63643
Iteration 920: error is 0.63643
Iteration 930: error is 0.63643
Iteration 940: error is 0.63643
Iteration 950: error is 0.63643
Iteration 960: error is 0.63643
Iteration 970: error is 0.63643
Iteration 980: error is 0.63643
Iteration 990: error is 0.63643
Iteration 1000: error is 0.63643
J_new = 0.8521
J_new = 0.8279
J_new = 0.8175
J_new = 0.8163
J_new = 0.8157
J_new = 0.8139
J_new = 0.8118
J_new = 0.8064
J_new = 0.8035
J_new = 0.7899
J_new = 0.7824
J_new = 0.7422
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1836
Iteration 20: error is 36.7143
Iteration 30: error is 36.7616
Iteration 40: error is 37.3901
Iteration 50: error is 36.5329
Iteration 60: error is 37.5878
Iteration 70: error is 37.5452
Iteration 80: error is 37.4385
Iteration 90: error is 38.0082
Iteration 100: error is 2.2245
```

Iteration 110: error is 1.2215
Iteration 120: error is 0.87111
Iteration 130: error is 0.77832
Iteration 140: error is 0.68966
Iteration 150: error is 0.67407
Iteration 160: error is 0.66791
Iteration 170: error is 0.66325
Iteration 180: error is 0.65906
Iteration 190: error is 0.65628
Iteration 200: error is 0.6542
Iteration 210: error is 0.65254
Iteration 220: error is 0.65109
Iteration 230: error is 0.64995
Iteration 240: error is 0.64895
Iteration 250: error is 0.64807
Iteration 260: error is 0.64673
Iteration 270: error is 0.64525
Iteration 280: error is 0.64415
Iteration 290: error is 0.64337
Iteration 300: error is 0.64277
Iteration 310: error is 0.64228
Iteration 320: error is 0.64194
Iteration 330: error is 0.64166
Iteration 340: error is 0.64143
Iteration 350: error is 0.64122
Iteration 360: error is 0.64106
Iteration 370: error is 0.64093
Iteration 380: error is 0.64081
Iteration 390: error is 0.64072
Iteration 400: error is 0.64063
Iteration 410: error is 0.64056
Iteration 420: error is 0.6405
Iteration 430: error is 0.64044
Iteration 440: error is 0.64039
Iteration 450: error is 0.64035
Iteration 460: error is 0.64032
Iteration 470: error is 0.64029
Iteration 480: error is 0.64026
Iteration 490: error is 0.64024
Iteration 500: error is 0.64022
Iteration 510: error is 0.6402
Iteration 520: error is 0.64019
Iteration 530: error is 0.64018
Iteration 540: error is 0.64016
Iteration 550: error is 0.64015
Iteration 560: error is 0.64014
Iteration 570: error is 0.64013
Iteration 580: error is 0.64013
Iteration 590: error is 0.64012
Iteration 600: error is 0.64011
Iteration 610: error is 0.64011
Iteration 620: error is 0.64011
Iteration 630: error is 0.6401
Iteration 640: error is 0.6401
Iteration 650: error is 0.64009
Iteration 660: error is 0.64009
Iteration 670: error is 0.64009
Iteration 680: error is 0.64009
Iteration 690: error is 0.64008
Iteration 700: error is 0.64008
Iteration 710: error is 0.64008
Iteration 720: error is 0.64008
Iteration 730: error is 0.64008
Iteration 740: error is 0.64008
Iteration 750: error is 0.64007

```
Iteration 760: error is 0.64007
Iteration 770: error is 0.64007
Iteration 780: error is 0.64007
Iteration 790: error is 0.64007
Iteration 800: error is 0.64007
Iteration 810: error is 0.64007
Iteration 820: error is 0.64007
Iteration 830: error is 0.64007
Iteration 840: error is 0.64007
Iteration 850: error is 0.64007
Iteration 860: error is 0.64007
Iteration 870: error is 0.64007
Iteration 880: error is 0.64007
Iteration 890: error is 0.64007
Iteration 900: error is 0.64006
Iteration 910: error is 0.64006
Iteration 920: error is 0.64006
Iteration 930: error is 0.64006
Iteration 940: error is 0.64006
Iteration 950: error is 0.64006
Iteration 960: error is 0.64006
Iteration 970: error is 0.64006
Iteration 980: error is 0.64006
Iteration 990: error is 0.64006
Iteration 1000: error is 0.64006
J_new = 0.8084
J_new = 0.7939
J_new = 0.7703
J_new = 0.7534
J_new = 0.7452
J_new = 0.7444
J_new = 0.7453
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1149
Iteration 20: error is 36.5796
Iteration 30: error is 36.9025
Iteration 40: error is 36.9507
Iteration 50: error is 36.9921
Iteration 60: error is 37.7863
Iteration 70: error is 37.7552
Iteration 80: error is 37.2033
Iteration 90: error is 37.3691
Iteration 100: error is 2.2768
Iteration 110: error is 1.2973
Iteration 120: error is 0.93066
Iteration 130: error is 0.84567
Iteration 140: error is 0.82242
Iteration 150: error is 0.80539
Iteration 160: error is 0.78345
Iteration 170: error is 0.75476
Iteration 180: error is 0.75284
Iteration 190: error is 0.66834
Iteration 200: error is 0.66121
Iteration 210: error is 0.65748
Iteration 220: error is 0.65603
Iteration 230: error is 0.65481
Iteration 240: error is 0.65302
Iteration 250: error is 0.65186
Iteration 260: error is 0.65034
Iteration 270: error is 0.64854
Iteration 280: error is 0.64746
Iteration 290: error is 0.64666
Iteration 300: error is 0.64573
```

Iteration 310: error is 0.64437
Iteration 320: error is 0.6437
Iteration 330: error is 0.64295
Iteration 340: error is 0.64246
Iteration 350: error is 0.64221
Iteration 360: error is 0.64204
Iteration 370: error is 0.64189
Iteration 380: error is 0.64175
Iteration 390: error is 0.64163
Iteration 400: error is 0.64152
Iteration 410: error is 0.64143
Iteration 420: error is 0.64136
Iteration 430: error is 0.64129
Iteration 440: error is 0.64123
Iteration 450: error is 0.64118
Iteration 460: error is 0.64113
Iteration 470: error is 0.64109
Iteration 480: error is 0.64106
Iteration 490: error is 0.64103
Iteration 500: error is 0.641
Iteration 510: error is 0.64098
Iteration 520: error is 0.64096
Iteration 530: error is 0.64094
Iteration 540: error is 0.64092
Iteration 550: error is 0.64091
Iteration 560: error is 0.64089
Iteration 570: error is 0.64088
Iteration 580: error is 0.64087
Iteration 590: error is 0.64086
Iteration 600: error is 0.64085
Iteration 610: error is 0.64085
Iteration 620: error is 0.64084
Iteration 630: error is 0.64083
Iteration 640: error is 0.64083
Iteration 650: error is 0.64082
Iteration 660: error is 0.64082
Iteration 670: error is 0.64081
Iteration 680: error is 0.64081
Iteration 690: error is 0.6408
Iteration 700: error is 0.6408
Iteration 710: error is 0.6408
Iteration 720: error is 0.64079
Iteration 730: error is 0.64079
Iteration 740: error is 0.64079
Iteration 750: error is 0.64079
Iteration 760: error is 0.64079
Iteration 770: error is 0.64078
Iteration 780: error is 0.64078
Iteration 790: error is 0.64078
Iteration 800: error is 0.64078
Iteration 810: error is 0.64078
Iteration 820: error is 0.64078
Iteration 830: error is 0.64078
Iteration 840: error is 0.64078
Iteration 850: error is 0.64077
Iteration 860: error is 0.64077
Iteration 870: error is 0.64077
Iteration 880: error is 0.64077
Iteration 890: error is 0.64077
Iteration 900: error is 0.64077
Iteration 910: error is 0.64077
Iteration 920: error is 0.64077
Iteration 930: error is 0.64077
Iteration 940: error is 0.64077
Iteration 950: error is 0.64077

```
Iteration 960: error is 0.64077
Iteration 970: error is 0.64077
Iteration 980: error is 0.64077
Iteration 990: error is 0.64077
Iteration 1000: error is 0.64077
J_new = 0.8569
J_new = 0.8276
J_new = 0.8156
J_new = 0.8139
J_new = 0.8117
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1255
Iteration 20: error is 36.8754
Iteration 30: error is 36.9111
Iteration 40: error is 36.7055
Iteration 50: error is 37.4355
Iteration 60: error is 36.9182
Iteration 70: error is 37.5657
Iteration 80: error is 37.2436
Iteration 90: error is 37.6263
Iteration 100: error is 2.2173
Iteration 110: error is 1.3342
Iteration 120: error is 1.0861
Iteration 130: error is 0.91113
Iteration 140: error is 0.81986
Iteration 150: error is 0.71278
Iteration 160: error is 0.69181
Iteration 170: error is 0.65931
Iteration 180: error is 0.65604
Iteration 190: error is 0.65396
Iteration 200: error is 0.65214
Iteration 210: error is 0.65068
Iteration 220: error is 0.64953
Iteration 230: error is 0.6483
Iteration 240: error is 0.64738
Iteration 250: error is 0.6466
Iteration 260: error is 0.64536
Iteration 270: error is 0.64395
Iteration 280: error is 0.64292
Iteration 290: error is 0.6422
Iteration 300: error is 0.64162
Iteration 310: error is 0.64118
Iteration 320: error is 0.64083
Iteration 330: error is 0.64055
Iteration 340: error is 0.64032
Iteration 350: error is 0.64014
Iteration 360: error is 0.63998
Iteration 370: error is 0.63985
Iteration 380: error is 0.63974
Iteration 390: error is 0.63965
Iteration 400: error is 0.63958
Iteration 410: error is 0.6395
Iteration 420: error is 0.63944
Iteration 430: error is 0.63939
Iteration 440: error is 0.63935
```

```
Iteration 450: error is 0.63931
Iteration 460: error is 0.63927
Iteration 470: error is 0.63924
Iteration 480: error is 0.63922
Iteration 490: error is 0.6392
Iteration 500: error is 0.63918
Iteration 510: error is 0.63916
Iteration 520: error is 0.63914
Iteration 530: error is 0.63913
Iteration 540: error is 0.63912
Iteration 550: error is 0.63911
Iteration 560: error is 0.6391
Iteration 570: error is 0.63909
Iteration 580: error is 0.63908
Iteration 590: error is 0.63907
Iteration 600: error is 0.63907
Iteration 610: error is 0.63906
Iteration 620: error is 0.63906
Iteration 630: error is 0.63906
Iteration 640: error is 0.63905
Iteration 650: error is 0.63905
Iteration 660: error is 0.63905
Iteration 670: error is 0.63904
Iteration 680: error is 0.63904
Iteration 690: error is 0.63904
Iteration 700: error is 0.63904
Iteration 710: error is 0.63903
Iteration 720: error is 0.63903
Iteration 730: error is 0.63903
Iteration 740: error is 0.63903
Iteration 750: error is 0.63903
Iteration 760: error is 0.63903
Iteration 770: error is 0.63903
Iteration 780: error is 0.63903
Iteration 790: error is 0.63903
Iteration 800: error is 0.63902
Iteration 810: error is 0.63902
Iteration 820: error is 0.63902
Iteration 830: error is 0.63902
Iteration 840: error is 0.63902
Iteration 850: error is 0.63902
Iteration 860: error is 0.63902
Iteration 870: error is 0.63902
Iteration 880: error is 0.63902
Iteration 890: error is 0.63902
Iteration 900: error is 0.63902
Iteration 910: error is 0.63902
Iteration 920: error is 0.63902
Iteration 930: error is 0.63902
Iteration 940: error is 0.63902
Iteration 950: error is 0.63902
Iteration 960: error is 0.63902
Iteration 970: error is 0.63902
Iteration 980: error is 0.63902
Iteration 990: error is 0.63902
Iteration 1000: error is 0.63902
J_new = 0.8702
J_new = 0.8384
J_new = 0.8213
J_new = 0.8097
J_new = 0.8063
J_new = 0.8014
J_new = 0.7857
J_new = 0.7434
J_new = 0.7420
```

```
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.7858
Iteration 20: error is 37.0692
Iteration 30: error is 37.3712
Iteration 40: error is 36.7248
Iteration 50: error is 36.997
Iteration 60: error is 37.1212
Iteration 70: error is 37.7949
Iteration 80: error is 37.3347
Iteration 90: error is 37.4757
Iteration 100: error is 2.3065
Iteration 110: error is 1.2269
Iteration 120: error is 0.80337
Iteration 130: error is 0.74298
Iteration 140: error is 0.70122
Iteration 150: error is 0.68572
Iteration 160: error is 0.67922
Iteration 170: error is 0.67439
Iteration 180: error is 0.67079
Iteration 190: error is 0.66806
Iteration 200: error is 0.66585
Iteration 210: error is 0.66402
Iteration 220: error is 0.66254
Iteration 230: error is 0.66128
Iteration 240: error is 0.66026
Iteration 250: error is 0.65936
Iteration 260: error is 0.65794
Iteration 270: error is 0.65639
Iteration 280: error is 0.65525
Iteration 290: error is 0.65444
Iteration 300: error is 0.65368
Iteration 310: error is 0.65317
Iteration 320: error is 0.65278
Iteration 330: error is 0.65247
Iteration 340: error is 0.6522
Iteration 350: error is 0.65199
Iteration 360: error is 0.65181
Iteration 370: error is 0.65166
Iteration 380: error is 0.65153
Iteration 390: error is 0.65142
Iteration 400: error is 0.65133
Iteration 410: error is 0.65125
Iteration 420: error is 0.65118
Iteration 430: error is 0.65112
Iteration 440: error is 0.65107
Iteration 450: error is 0.65102
Iteration 460: error is 0.65098
Iteration 470: error is 0.65095
Iteration 480: error is 0.65092
Iteration 490: error is 0.65089
Iteration 500: error is 0.65087
Iteration 510: error is 0.65085
Iteration 520: error is 0.65083
Iteration 530: error is 0.65081
Iteration 540: error is 0.6508
Iteration 550: error is 0.65078
Iteration 560: error is 0.65077
Iteration 570: error is 0.65076
Iteration 580: error is 0.65075
Iteration 590: error is 0.65074
Iteration 600: error is 0.65073
Iteration 610: error is 0.65073
```

```
Iteration 620: error is 0.65072
Iteration 630: error is 0.65071
Iteration 640: error is 0.65071
Iteration 650: error is 0.6507
Iteration 660: error is 0.6507
Iteration 670: error is 0.6507
Iteration 680: error is 0.65069
Iteration 690: error is 0.65069
Iteration 700: error is 0.65069
Iteration 710: error is 0.65068
Iteration 720: error is 0.65068
Iteration 730: error is 0.65068
Iteration 740: error is 0.65068
Iteration 750: error is 0.65068
Iteration 760: error is 0.65067
Iteration 770: error is 0.65067
Iteration 780: error is 0.65067
Iteration 790: error is 0.65067
Iteration 800: error is 0.65067
Iteration 810: error is 0.65067
Iteration 820: error is 0.65067
Iteration 830: error is 0.65067
Iteration 840: error is 0.65067
Iteration 850: error is 0.65066
Iteration 860: error is 0.65066
Iteration 870: error is 0.65066
Iteration 880: error is 0.65066
Iteration 890: error is 0.65066
Iteration 900: error is 0.65066
Iteration 910: error is 0.65066
Iteration 920: error is 0.65066
Iteration 930: error is 0.65066
Iteration 940: error is 0.65066
Iteration 950: error is 0.65066
Iteration 960: error is 0.65066
Iteration 970: error is 0.65066
Iteration 980: error is 0.65066
Iteration 990: error is 0.65066
Iteration 1000: error is 0.65066
J_new = 0.7846
J_new = 0.7625
J_new = 0.7502
J_new = 0.7402
J_new = 0.7398
J_new = 0.7399
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.7935
Iteration 20: error is 37.4008
Iteration 30: error is 36.8741
Iteration 40: error is 37.4626
Iteration 50: error is 37.2276
Iteration 60: error is 36.7086
Iteration 70: error is 37.9142
Iteration 80: error is 37.4265
Iteration 90: error is 37.4402
Iteration 100: error is 2.1693
Iteration 110: error is 1.3047
Iteration 120: error is 0.89216
Iteration 130: error is 0.82463
Iteration 140: error is 0.76015
Iteration 150: error is 0.71563
Iteration 160: error is 0.6762
Iteration 170: error is 0.67099
```

Iteration 180: error is 0.66518
Iteration 190: error is 0.66226
Iteration 200: error is 0.65986
Iteration 210: error is 0.65775
Iteration 220: error is 0.65613
Iteration 230: error is 0.65484
Iteration 240: error is 0.65382
Iteration 250: error is 0.65298
Iteration 260: error is 0.6516
Iteration 270: error is 0.65007
Iteration 280: error is 0.64899
Iteration 290: error is 0.64817
Iteration 300: error is 0.64753
Iteration 310: error is 0.64704
Iteration 320: error is 0.64666
Iteration 330: error is 0.64635
Iteration 340: error is 0.6461
Iteration 350: error is 0.6459
Iteration 360: error is 0.64573
Iteration 370: error is 0.64559
Iteration 380: error is 0.64547
Iteration 390: error is 0.64537
Iteration 400: error is 0.64528
Iteration 410: error is 0.64521
Iteration 420: error is 0.64514
Iteration 430: error is 0.64509
Iteration 440: error is 0.64504
Iteration 450: error is 0.645
Iteration 460: error is 0.64496
Iteration 470: error is 0.64493
Iteration 480: error is 0.6449
Iteration 490: error is 0.64487
Iteration 500: error is 0.64485
Iteration 510: error is 0.64483
Iteration 520: error is 0.64481
Iteration 530: error is 0.6448
Iteration 540: error is 0.64478
Iteration 550: error is 0.64477
Iteration 560: error is 0.64476
Iteration 570: error is 0.64475
Iteration 580: error is 0.64474
Iteration 590: error is 0.64473
Iteration 600: error is 0.64472
Iteration 610: error is 0.64471
Iteration 620: error is 0.64471
Iteration 630: error is 0.6447
Iteration 640: error is 0.6447
Iteration 650: error is 0.64469
Iteration 660: error is 0.64469
Iteration 670: error is 0.64468
Iteration 680: error is 0.64468
Iteration 690: error is 0.64468
Iteration 700: error is 0.64467
Iteration 710: error is 0.64467
Iteration 720: error is 0.64467
Iteration 730: error is 0.64467
Iteration 740: error is 0.64466
Iteration 750: error is 0.64466
Iteration 760: error is 0.64466
Iteration 770: error is 0.64466
Iteration 780: error is 0.64466
Iteration 790: error is 0.64466
Iteration 800: error is 0.64465
Iteration 810: error is 0.64465
Iteration 820: error is 0.64465

```
Iteration 830: error is 0.64465
Iteration 840: error is 0.64465
Iteration 850: error is 0.64465
Iteration 860: error is 0.64465
Iteration 870: error is 0.64465
Iteration 880: error is 0.64465
Iteration 890: error is 0.64465
Iteration 900: error is 0.64465
Iteration 910: error is 0.64464
Iteration 920: error is 0.64464
Iteration 930: error is 0.64464
Iteration 940: error is 0.64464
Iteration 950: error is 0.64464
Iteration 960: error is 0.64464
Iteration 970: error is 0.64464
Iteration 980: error is 0.64464
Iteration 990: error is 0.64464
Iteration 1000: error is 0.64464
J_new = 0.8379
J_new = 0.8221
J_new = 0.8148
J_new = 0.8116
J_new = 0.8099
J_new = 0.8054
J_new = 0.8006
J_new = 0.7851
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6753
Iteration 20: error is 37.8451
Iteration 30: error is 37.163
Iteration 40: error is 37.615
Iteration 50: error is 37.9545
Iteration 60: error is 37.4721
Iteration 70: error is 37.3621
Iteration 80: error is 37.7004
Iteration 90: error is 37.5517
Iteration 100: error is 2.2443
Iteration 110: error is 1.1409
Iteration 120: error is 0.76407
Iteration 130: error is 0.69906
Iteration 140: error is 0.67741
Iteration 150: error is 0.66692
Iteration 160: error is 0.65979
Iteration 170: error is 0.65471
Iteration 180: error is 0.65074
Iteration 190: error is 0.64774
Iteration 200: error is 0.64534
Iteration 210: error is 0.64338
Iteration 220: error is 0.64178
Iteration 230: error is 0.6404
Iteration 240: error is 0.63923
Iteration 250: error is 0.63823
Iteration 260: error is 0.6367
Iteration 270: error is 0.63508
Iteration 280: error is 0.63387
Iteration 290: error is 0.63299
Iteration 300: error is 0.6323
Iteration 310: error is 0.63178
Iteration 320: error is 0.63138
Iteration 330: error is 0.63105
```

Iteration 340: error is 0.63079
Iteration 350: error is 0.63057
Iteration 360: error is 0.6304
Iteration 370: error is 0.63026
Iteration 380: error is 0.63014
Iteration 390: error is 0.63004
Iteration 400: error is 0.62995
Iteration 410: error is 0.62988
Iteration 420: error is 0.62982
Iteration 430: error is 0.62976
Iteration 440: error is 0.62971
Iteration 450: error is 0.62967
Iteration 460: error is 0.62964
Iteration 470: error is 0.62961
Iteration 480: error is 0.62958
Iteration 490: error is 0.62956
Iteration 500: error is 0.62954
Iteration 510: error is 0.62952
Iteration 520: error is 0.6295
Iteration 530: error is 0.62949
Iteration 540: error is 0.62948
Iteration 550: error is 0.62947
Iteration 560: error is 0.62946
Iteration 570: error is 0.62945
Iteration 580: error is 0.62944
Iteration 590: error is 0.62943
Iteration 600: error is 0.62943
Iteration 610: error is 0.62942
Iteration 620: error is 0.62942
Iteration 630: error is 0.62941
Iteration 640: error is 0.62941
Iteration 650: error is 0.6294
Iteration 660: error is 0.6294
Iteration 670: error is 0.6294
Iteration 680: error is 0.6294
Iteration 690: error is 0.62939
Iteration 700: error is 0.62939
Iteration 710: error is 0.62939
Iteration 720: error is 0.62939
Iteration 730: error is 0.62939
Iteration 740: error is 0.62939
Iteration 750: error is 0.62938
Iteration 760: error is 0.62938
Iteration 770: error is 0.62938
Iteration 780: error is 0.62938
Iteration 790: error is 0.62938
Iteration 800: error is 0.62938
Iteration 810: error is 0.62938
Iteration 820: error is 0.62938
Iteration 830: error is 0.62938
Iteration 840: error is 0.62938
Iteration 850: error is 0.62938
Iteration 860: error is 0.62938
Iteration 870: error is 0.62938
Iteration 880: error is 0.62938
Iteration 890: error is 0.62938
Iteration 900: error is 0.62938
Iteration 910: error is 0.62938
Iteration 920: error is 0.62938
Iteration 930: error is 0.62938
Iteration 940: error is 0.62938
Iteration 950: error is 0.62938
Iteration 960: error is 0.62938
Iteration 970: error is 0.62938
Iteration 980: error is 0.62938

```
Iteration 990: error is 0.62938
Iteration 1000: error is 0.62938
J_new = 0.8430
J_new = 0.8274
J_new = 0.8175
J_new = 0.8156
J_new = 0.8148
J_new = 0.8111
J_new = 0.8072
J_new = 0.8027
J_new = 0.7907
J_new = 0.7816
J_new = 0.7430
J_new = 0.7421
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.5278
Iteration 20: error is 37.3151
Iteration 30: error is 36.7133
Iteration 40: error is 37.1292
Iteration 50: error is 37.4111
Iteration 60: error is 37.475
Iteration 70: error is 36.4882
Iteration 80: error is 37.2606
Iteration 90: error is 37.743
Iteration 100: error is 2.3511
Iteration 110: error is 1.2702
Iteration 120: error is 0.88865
Iteration 130: error is 0.83442
Iteration 140: error is 0.8077
Iteration 150: error is 0.787
Iteration 160: error is 0.74196
Iteration 170: error is 0.66441
Iteration 180: error is 0.65943
Iteration 190: error is 0.6572
Iteration 200: error is 0.6554
Iteration 210: error is 0.65384
Iteration 220: error is 0.65262
Iteration 230: error is 0.65154
Iteration 240: error is 0.65057
Iteration 250: error is 0.64811
Iteration 260: error is 0.64679
Iteration 270: error is 0.64545
Iteration 280: error is 0.64443
Iteration 290: error is 0.64364
Iteration 300: error is 0.64301
Iteration 310: error is 0.64252
Iteration 320: error is 0.64214
Iteration 330: error is 0.64184
Iteration 340: error is 0.6416
Iteration 350: error is 0.6414
Iteration 360: error is 0.64124
Iteration 370: error is 0.6411
Iteration 380: error is 0.64099
Iteration 390: error is 0.64089
Iteration 400: error is 0.64081
Iteration 410: error is 0.64075
Iteration 420: error is 0.64069
Iteration 430: error is 0.64064
Iteration 440: error is 0.64059
Iteration 450: error is 0.64056
Iteration 460: error is 0.64052
Iteration 470: error is 0.6405
```

```
Iteration 480: error is 0.64047
Iteration 490: error is 0.64045
Iteration 500: error is 0.64043
Iteration 510: error is 0.64042
Iteration 520: error is 0.6404
Iteration 530: error is 0.64039
Iteration 540: error is 0.64038
Iteration 550: error is 0.64037
Iteration 560: error is 0.64036
Iteration 570: error is 0.64036
Iteration 580: error is 0.64035
Iteration 590: error is 0.64034
Iteration 600: error is 0.64034
Iteration 610: error is 0.64033
Iteration 620: error is 0.64033
Iteration 630: error is 0.64033
Iteration 640: error is 0.64032
Iteration 650: error is 0.64032
Iteration 660: error is 0.64032
Iteration 670: error is 0.64032
Iteration 680: error is 0.64031
Iteration 690: error is 0.64031
Iteration 700: error is 0.64031
Iteration 710: error is 0.64031
Iteration 720: error is 0.64031
Iteration 730: error is 0.64031
Iteration 740: error is 0.64031
Iteration 750: error is 0.6403
Iteration 760: error is 0.6403
Iteration 770: error is 0.6403
Iteration 780: error is 0.6403
Iteration 790: error is 0.6403
Iteration 800: error is 0.6403
Iteration 810: error is 0.6403
Iteration 820: error is 0.6403
Iteration 830: error is 0.6403
Iteration 840: error is 0.6403
Iteration 850: error is 0.6403
Iteration 860: error is 0.6403
Iteration 870: error is 0.6403
Iteration 880: error is 0.6403
Iteration 890: error is 0.6403
Iteration 900: error is 0.6403
Iteration 910: error is 0.6403
Iteration 920: error is 0.6403
Iteration 930: error is 0.6403
Iteration 940: error is 0.6403
Iteration 950: error is 0.6403
Iteration 960: error is 0.6403
Iteration 970: error is 0.6403
Iteration 980: error is 0.6403
Iteration 990: error is 0.6403
Iteration 1000: error is 0.6403
J_new = 0.8029
J_new = 0.7870
J_new = 0.7627
J_new = 0.7533
J_new = 0.7451
J_new = 0.7449
J_new = 0.7456
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.6267
Iteration 20: error is 36.9948
```

Iteration 30: error is 36.7511
Iteration 40: error is 36.4511
Iteration 50: error is 36.7186
Iteration 60: error is 37.2168
Iteration 70: error is 36.8085
Iteration 80: error is 37.0277
Iteration 90: error is 36.8353
Iteration 100: error is 2.0442
Iteration 110: error is 1.1611
Iteration 120: error is 0.83485
Iteration 130: error is 0.75754
Iteration 140: error is 0.71243
Iteration 150: error is 0.67613
Iteration 160: error is 0.66948
Iteration 170: error is 0.66472
Iteration 180: error is 0.66119
Iteration 190: error is 0.65869
Iteration 200: error is 0.65644
Iteration 210: error is 0.65421
Iteration 220: error is 0.65039
Iteration 230: error is 0.64804
Iteration 240: error is 0.64701
Iteration 250: error is 0.6461
Iteration 260: error is 0.64475
Iteration 270: error is 0.64319
Iteration 280: error is 0.6421
Iteration 290: error is 0.64133
Iteration 300: error is 0.64071
Iteration 310: error is 0.64025
Iteration 320: error is 0.6399
Iteration 330: error is 0.63961
Iteration 340: error is 0.63937
Iteration 350: error is 0.63918
Iteration 360: error is 0.63902
Iteration 370: error is 0.63889
Iteration 380: error is 0.63878
Iteration 390: error is 0.63868
Iteration 400: error is 0.6386
Iteration 410: error is 0.63853
Iteration 420: error is 0.63847
Iteration 430: error is 0.63842
Iteration 440: error is 0.63837
Iteration 450: error is 0.63833
Iteration 460: error is 0.6383
Iteration 470: error is 0.63827
Iteration 480: error is 0.63824
Iteration 490: error is 0.63822
Iteration 500: error is 0.6382
Iteration 510: error is 0.63818
Iteration 520: error is 0.63817
Iteration 530: error is 0.63815
Iteration 540: error is 0.63814
Iteration 550: error is 0.63813
Iteration 560: error is 0.63812
Iteration 570: error is 0.63811
Iteration 580: error is 0.63811
Iteration 590: error is 0.6381
Iteration 600: error is 0.63809
Iteration 610: error is 0.63809
Iteration 620: error is 0.63808
Iteration 630: error is 0.63808
Iteration 640: error is 0.63808
Iteration 650: error is 0.63807
Iteration 660: error is 0.63807
Iteration 670: error is 0.63807

```
Iteration 680: error is 0.63807
Iteration 690: error is 0.63806
Iteration 700: error is 0.63806
Iteration 710: error is 0.63806
Iteration 720: error is 0.63806
Iteration 730: error is 0.63806
Iteration 740: error is 0.63806
Iteration 750: error is 0.63806
Iteration 760: error is 0.63805
Iteration 770: error is 0.63805
Iteration 780: error is 0.63805
Iteration 790: error is 0.63805
Iteration 800: error is 0.63805
Iteration 810: error is 0.63805
Iteration 820: error is 0.63805
Iteration 830: error is 0.63805
Iteration 840: error is 0.63805
Iteration 850: error is 0.63805
Iteration 860: error is 0.63805
Iteration 870: error is 0.63805
Iteration 880: error is 0.63805
Iteration 890: error is 0.63805
Iteration 900: error is 0.63805
Iteration 910: error is 0.63805
Iteration 920: error is 0.63805
Iteration 930: error is 0.63805
Iteration 940: error is 0.63805
Iteration 950: error is 0.63805
Iteration 960: error is 0.63805
Iteration 970: error is 0.63805
Iteration 980: error is 0.63805
Iteration 990: error is 0.63805
Iteration 1000: error is 0.63805
J_new = 0.8316
J_new = 0.8183
J_new = 0.8146
J_new = 0.8128
J_new = 0.8093
J_new = 0.8071
J_new = 0.8002
J_new = 0.7867
J_new = 0.7424
J_new = 0.7429
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.757
Iteration 20: error is 37.0407
Iteration 30: error is 36.6834
Iteration 40: error is 36.9887
Iteration 50: error is 36.6378
Iteration 60: error is 37.1881
Iteration 70: error is 37.0885
Iteration 80: error is 37.1724
Iteration 90: error is 37.6786
Iteration 100: error is 2.1686
Iteration 110: error is 1.1918
Iteration 120: error is 0.74362
Iteration 130: error is 0.69691
Iteration 140: error is 0.68306
Iteration 150: error is 0.6733
Iteration 160: error is 0.66679
Iteration 170: error is 0.66206
Iteration 180: error is 0.65856
Iteration 190: error is 0.65587
```

Iteration 200: error is 0.65369
Iteration 210: error is 0.65202
Iteration 220: error is 0.65056
Iteration 230: error is 0.64939
Iteration 240: error is 0.64836
Iteration 250: error is 0.6475
Iteration 260: error is 0.64616
Iteration 270: error is 0.6447
Iteration 280: error is 0.64361
Iteration 290: error is 0.64278
Iteration 300: error is 0.64215
Iteration 310: error is 0.64164
Iteration 320: error is 0.64128
Iteration 330: error is 0.64101
Iteration 340: error is 0.64077
Iteration 350: error is 0.64058
Iteration 360: error is 0.64043
Iteration 370: error is 0.64029
Iteration 380: error is 0.64018
Iteration 390: error is 0.64009
Iteration 400: error is 0.64002
Iteration 410: error is 0.63995
Iteration 420: error is 0.6399
Iteration 430: error is 0.63985
Iteration 440: error is 0.63981
Iteration 450: error is 0.63977
Iteration 460: error is 0.63974
Iteration 470: error is 0.63972
Iteration 480: error is 0.63969
Iteration 490: error is 0.63967
Iteration 500: error is 0.63966
Iteration 510: error is 0.63964
Iteration 520: error is 0.63963
Iteration 530: error is 0.63961
Iteration 540: error is 0.6396
Iteration 550: error is 0.63959
Iteration 560: error is 0.63959
Iteration 570: error is 0.63958
Iteration 580: error is 0.63957
Iteration 590: error is 0.63957
Iteration 600: error is 0.63956
Iteration 610: error is 0.63956
Iteration 620: error is 0.63955
Iteration 630: error is 0.63955
Iteration 640: error is 0.63955
Iteration 650: error is 0.63954
Iteration 660: error is 0.63954
Iteration 670: error is 0.63954
Iteration 680: error is 0.63954
Iteration 690: error is 0.63954
Iteration 700: error is 0.63953
Iteration 710: error is 0.63953
Iteration 720: error is 0.63953
Iteration 730: error is 0.63953
Iteration 740: error is 0.63953
Iteration 750: error is 0.63953
Iteration 760: error is 0.63953
Iteration 770: error is 0.63953
Iteration 780: error is 0.63953
Iteration 790: error is 0.63953
Iteration 800: error is 0.63953
Iteration 810: error is 0.63953
Iteration 820: error is 0.63952
Iteration 830: error is 0.63952
Iteration 840: error is 0.63952

```
Iteration 850: error is 0.63952
Iteration 860: error is 0.63952
Iteration 870: error is 0.63952
Iteration 880: error is 0.63952
Iteration 890: error is 0.63952
Iteration 900: error is 0.63952
Iteration 910: error is 0.63952
Iteration 920: error is 0.63952
Iteration 930: error is 0.63952
Iteration 940: error is 0.63952
Iteration 950: error is 0.63952
Iteration 960: error is 0.63952
Iteration 970: error is 0.63952
Iteration 980: error is 0.63952
Iteration 990: error is 0.63952
Iteration 1000: error is 0.63952
J_new = 0.8340
J_new = 0.8203
J_new = 0.8196
J_new = 0.8197
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.327
Iteration 20: error is 36.8996
Iteration 30: error is 36.0205
Iteration 40: error is 36.7813
Iteration 50: error is 37.0647
Iteration 60: error is 37.3215
Iteration 70: error is 37.4796
Iteration 80: error is 37.0914
Iteration 90: error is 37.6374
Iteration 100: error is 2.2418
Iteration 110: error is 1.1877
Iteration 120: error is 0.82275
Iteration 130: error is 0.69981
Iteration 140: error is 0.68213
Iteration 150: error is 0.6706
Iteration 160: error is 0.66406
Iteration 170: error is 0.6594
Iteration 180: error is 0.65591
Iteration 190: error is 0.6532
Iteration 200: error is 0.65107
Iteration 210: error is 0.64933
Iteration 220: error is 0.6479
Iteration 230: error is 0.64678
Iteration 240: error is 0.64574
Iteration 250: error is 0.6448
Iteration 260: error is 0.64338
Iteration 270: error is 0.64188
Iteration 280: error is 0.64079
Iteration 290: error is 0.64001
Iteration 300: error is 0.63941
Iteration 310: error is 0.63894
Iteration 320: error is 0.63858
Iteration 330: error is 0.63829
Iteration 340: error is 0.63805
Iteration 350: error is 0.63786
Iteration 360: error is 0.6377
Iteration 370: error is 0.63756
Iteration 380: error is 0.63745
Iteration 390: error is 0.63735
Iteration 400: error is 0.63722
Iteration 410: error is 0.63714
Iteration 420: error is 0.63708
```

```
Iteration 430: error is 0.63703
Iteration 440: error is 0.63699
Iteration 450: error is 0.63695
Iteration 460: error is 0.63692
Iteration 470: error is 0.63689
Iteration 480: error is 0.63686
Iteration 490: error is 0.63684
Iteration 500: error is 0.63682
Iteration 510: error is 0.63681
Iteration 520: error is 0.63679
Iteration 530: error is 0.63678
Iteration 540: error is 0.63676
Iteration 550: error is 0.63675
Iteration 560: error is 0.63674
Iteration 570: error is 0.63674
Iteration 580: error is 0.63673
Iteration 590: error is 0.63672
Iteration 600: error is 0.63671
Iteration 610: error is 0.63671
Iteration 620: error is 0.6367
Iteration 630: error is 0.6367
Iteration 640: error is 0.6367
Iteration 650: error is 0.63669
Iteration 660: error is 0.63669
Iteration 670: error is 0.63669
Iteration 680: error is 0.63669
Iteration 690: error is 0.63668
Iteration 700: error is 0.63668
Iteration 710: error is 0.63668
Iteration 720: error is 0.63668
Iteration 730: error is 0.63668
Iteration 740: error is 0.63668
Iteration 750: error is 0.63667
Iteration 760: error is 0.63667
Iteration 770: error is 0.63667
Iteration 780: error is 0.63667
Iteration 790: error is 0.63667
Iteration 800: error is 0.63667
Iteration 810: error is 0.63667
Iteration 820: error is 0.63667
Iteration 830: error is 0.63667
Iteration 840: error is 0.63667
Iteration 850: error is 0.63667
Iteration 860: error is 0.63667
Iteration 870: error is 0.63667
Iteration 880: error is 0.63667
Iteration 890: error is 0.63667
Iteration 900: error is 0.63667
Iteration 910: error is 0.63667
Iteration 920: error is 0.63667
Iteration 930: error is 0.63667
Iteration 940: error is 0.63667
Iteration 950: error is 0.63666
Iteration 960: error is 0.63666
Iteration 970: error is 0.63666
Iteration 980: error is 0.63666
Iteration 990: error is 0.63666
Iteration 1000: error is 0.63666
J_new = 0.8657
J_new = 0.8365
J_new = 0.8241
J_new = 0.8155
J_new = 0.8137
J_new = 0.8120
J_new = 0.8081
```

```
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4078
Iteration 20: error is 36.1006
Iteration 30: error is 36.7665
Iteration 40: error is 37.292
Iteration 50: error is 37.058
Iteration 60: error is 36.6643
Iteration 70: error is 36.9304
Iteration 80: error is 37.1242
Iteration 90: error is 37.178
Iteration 100: error is 2.2507
Iteration 110: error is 1.1595
Iteration 120: error is 0.88876
Iteration 130: error is 0.72211
Iteration 140: error is 0.69016
Iteration 150: error is 0.67849
Iteration 160: error is 0.67173
Iteration 170: error is 0.66698
Iteration 180: error is 0.66334
Iteration 190: error is 0.6605
Iteration 200: error is 0.65857
Iteration 210: error is 0.65662
Iteration 220: error is 0.65534
Iteration 230: error is 0.65387
Iteration 240: error is 0.6528
Iteration 250: error is 0.65186
Iteration 260: error is 0.65049
Iteration 270: error is 0.64889
Iteration 280: error is 0.64776
Iteration 290: error is 0.64694
Iteration 300: error is 0.64619
Iteration 310: error is 0.64369
Iteration 320: error is 0.64234
Iteration 330: error is 0.64164
Iteration 340: error is 0.64129
Iteration 350: error is 0.64108
Iteration 360: error is 0.6409
Iteration 370: error is 0.64075
Iteration 380: error is 0.64062
Iteration 390: error is 0.64052
Iteration 400: error is 0.64043
Iteration 410: error is 0.64035
Iteration 420: error is 0.64028
Iteration 430: error is 0.64022
Iteration 440: error is 0.64018
Iteration 450: error is 0.64013
Iteration 460: error is 0.6401
Iteration 470: error is 0.64007
Iteration 480: error is 0.64004
Iteration 490: error is 0.64001
Iteration 500: error is 0.63999
Iteration 510: error is 0.63997
Iteration 520: error is 0.63995
Iteration 530: error is 0.63994
Iteration 540: error is 0.63992
Iteration 550: error is 0.63991
```

```
Iteration 560: error is 0.63985
Iteration 570: error is 0.63983
Iteration 580: error is 0.63982
Iteration 590: error is 0.63981
Iteration 600: error is 0.6398
Iteration 610: error is 0.6398
Iteration 620: error is 0.63979
Iteration 630: error is 0.63978
Iteration 640: error is 0.63978
Iteration 650: error is 0.63977
Iteration 660: error is 0.63977
Iteration 670: error is 0.63977
Iteration 680: error is 0.63976
Iteration 690: error is 0.63976
Iteration 700: error is 0.63976
Iteration 710: error is 0.63975
Iteration 720: error is 0.63974
Iteration 730: error is 0.63974
Iteration 740: error is 0.63974
Iteration 750: error is 0.63974
Iteration 760: error is 0.63974
Iteration 770: error is 0.63974
Iteration 780: error is 0.63973
Iteration 790: error is 0.63973
Iteration 800: error is 0.63973
Iteration 810: error is 0.63973
Iteration 820: error is 0.63973
Iteration 830: error is 0.63973
Iteration 840: error is 0.63973
Iteration 850: error is 0.63973
Iteration 860: error is 0.63973
Iteration 870: error is 0.63973
Iteration 880: error is 0.63973
Iteration 890: error is 0.63973
Iteration 900: error is 0.63972
Iteration 910: error is 0.63972
Iteration 920: error is 0.63972
Iteration 930: error is 0.63972
Iteration 940: error is 0.63972
Iteration 950: error is 0.63972
Iteration 960: error is 0.63972
Iteration 970: error is 0.63972
Iteration 980: error is 0.63972
Iteration 990: error is 0.63972
Iteration 1000: error is 0.63972
J_new = 0.8439
J_new = 0.8281
J_new = 0.8163
J_new = 0.8143
J_new = 0.8118
J_new = 0.8075
J_new = 0.8059
J_new = 0.8014
J_new = 0.7861
J_new = 0.7421
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2644
Iteration 20: error is 36.9109
Iteration 30: error is 36.7161
Iteration 40: error is 37.1395
Iteration 50: error is 37.3817
Iteration 60: error is 37.018
```

Iteration 70: error is 37.7829
Iteration 80: error is 38.2411
Iteration 90: error is 38.1909
Iteration 100: error is 2.4545
Iteration 110: error is 1.2873
Iteration 120: error is 0.89277
Iteration 130: error is 0.72461
Iteration 140: error is 0.71391
Iteration 150: error is 0.6663
Iteration 160: error is 0.65882
Iteration 170: error is 0.65291
Iteration 180: error is 0.64937
Iteration 190: error is 0.64698
Iteration 200: error is 0.64463
Iteration 210: error is 0.64265
Iteration 220: error is 0.64132
Iteration 230: error is 0.64001
Iteration 240: error is 0.63904
Iteration 250: error is 0.63813
Iteration 260: error is 0.63675
Iteration 270: error is 0.63522
Iteration 280: error is 0.63411
Iteration 290: error is 0.63336
Iteration 300: error is 0.63279
Iteration 310: error is 0.63234
Iteration 320: error is 0.63198
Iteration 330: error is 0.6317
Iteration 340: error is 0.63148
Iteration 350: error is 0.63129
Iteration 360: error is 0.63114
Iteration 370: error is 0.63101
Iteration 380: error is 0.63091
Iteration 390: error is 0.63082
Iteration 400: error is 0.63074
Iteration 410: error is 0.63068
Iteration 420: error is 0.63062
Iteration 430: error is 0.63058
Iteration 440: error is 0.63054
Iteration 450: error is 0.6305
Iteration 460: error is 0.63047
Iteration 470: error is 0.63045
Iteration 480: error is 0.63043
Iteration 490: error is 0.63041
Iteration 500: error is 0.63039
Iteration 510: error is 0.63038
Iteration 520: error is 0.63036
Iteration 530: error is 0.63035
Iteration 540: error is 0.63034
Iteration 550: error is 0.63033
Iteration 560: error is 0.63033
Iteration 570: error is 0.63032
Iteration 580: error is 0.63031
Iteration 590: error is 0.63031
Iteration 600: error is 0.6303
Iteration 610: error is 0.6303
Iteration 620: error is 0.63029
Iteration 630: error is 0.63029
Iteration 640: error is 0.63029
Iteration 650: error is 0.63029
Iteration 660: error is 0.63028
Iteration 670: error is 0.63028
Iteration 680: error is 0.63028
Iteration 690: error is 0.63028
Iteration 700: error is 0.63028
Iteration 710: error is 0.63028

```
Iteration 720: error is 0.63027
Iteration 730: error is 0.63027
Iteration 740: error is 0.63027
Iteration 750: error is 0.63027
Iteration 760: error is 0.63027
Iteration 770: error is 0.63027
Iteration 780: error is 0.63027
Iteration 790: error is 0.63027
Iteration 800: error is 0.63027
Iteration 810: error is 0.63027
Iteration 820: error is 0.63027
Iteration 830: error is 0.63027
Iteration 840: error is 0.63027
Iteration 850: error is 0.63027
Iteration 860: error is 0.63027
Iteration 870: error is 0.63027
Iteration 880: error is 0.63027
Iteration 890: error is 0.63027
Iteration 900: error is 0.63027
Iteration 910: error is 0.63027
Iteration 920: error is 0.63027
Iteration 930: error is 0.63027
Iteration 940: error is 0.63027
Iteration 950: error is 0.63027
Iteration 960: error is 0.63027
Iteration 970: error is 0.63027
Iteration 980: error is 0.63026
Iteration 990: error is 0.63026
Iteration 1000: error is 0.63026
J_new = 0.7979
J_new = 0.7742
J_new = 0.7529
J_new = 0.7448
J_new = 0.7444
J_new = 0.7453
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8898
Iteration 20: error is 37.3582
Iteration 30: error is 36.4975
Iteration 40: error is 36.8124
Iteration 50: error is 36.319
Iteration 60: error is 36.7366
Iteration 70: error is 37.0773
Iteration 80: error is 37.6016
Iteration 90: error is 37.7074
Iteration 100: error is 2.1826
Iteration 110: error is 1.227
Iteration 120: error is 0.80065
Iteration 130: error is 0.75174
Iteration 140: error is 0.71344
Iteration 150: error is 0.70169
Iteration 160: error is 0.69554
Iteration 170: error is 0.69133
Iteration 180: error is 0.68798
Iteration 190: error is 0.68484
Iteration 200: error is 0.68142
Iteration 210: error is 0.67875
Iteration 220: error is 0.67731
Iteration 230: error is 0.67622
Iteration 240: error is 0.67532
Iteration 250: error is 0.67455
Iteration 260: error is 0.67338
Iteration 270: error is 0.67216
```

Iteration 280: error is 0.67124
Iteration 290: error is 0.67059
Iteration 300: error is 0.67009
Iteration 310: error is 0.66973
Iteration 320: error is 0.66945
Iteration 330: error is 0.66923
Iteration 340: error is 0.66906
Iteration 350: error is 0.66892
Iteration 360: error is 0.6688
Iteration 370: error is 0.66871
Iteration 380: error is 0.66863
Iteration 390: error is 0.66857
Iteration 400: error is 0.66852
Iteration 410: error is 0.66847
Iteration 420: error is 0.66843
Iteration 430: error is 0.6684
Iteration 440: error is 0.66837
Iteration 450: error is 0.66835
Iteration 460: error is 0.66833
Iteration 470: error is 0.66831
Iteration 480: error is 0.6683
Iteration 490: error is 0.66829
Iteration 500: error is 0.66828
Iteration 510: error is 0.66827
Iteration 520: error is 0.66826
Iteration 530: error is 0.66825
Iteration 540: error is 0.66825
Iteration 550: error is 0.66824
Iteration 560: error is 0.66824
Iteration 570: error is 0.66823
Iteration 580: error is 0.66823
Iteration 590: error is 0.66823
Iteration 600: error is 0.66822
Iteration 610: error is 0.66822
Iteration 620: error is 0.66822
Iteration 630: error is 0.66822
Iteration 640: error is 0.66821
Iteration 650: error is 0.66821
Iteration 660: error is 0.66821
Iteration 670: error is 0.66821
Iteration 680: error is 0.66821
Iteration 690: error is 0.66821
Iteration 700: error is 0.66821
Iteration 710: error is 0.66821
Iteration 720: error is 0.66821
Iteration 730: error is 0.66821
Iteration 740: error is 0.66821
Iteration 750: error is 0.66821
Iteration 760: error is 0.66821
Iteration 770: error is 0.6682
Iteration 780: error is 0.6682
Iteration 790: error is 0.6682
Iteration 800: error is 0.6682
Iteration 810: error is 0.6682
Iteration 820: error is 0.6682
Iteration 830: error is 0.6682
Iteration 840: error is 0.6682
Iteration 850: error is 0.6682
Iteration 860: error is 0.6682
Iteration 870: error is 0.6682
Iteration 880: error is 0.6682
Iteration 890: error is 0.6682
Iteration 900: error is 0.6682
Iteration 910: error is 0.6682
Iteration 920: error is 0.6682

```
Iteration 930: error is 0.6682
Iteration 940: error is 0.6682
Iteration 950: error is 0.6682
Iteration 960: error is 0.6682
Iteration 970: error is 0.6682
Iteration 980: error is 0.6682
Iteration 990: error is 0.6682
Iteration 1000: error is 0.6682
J_new = 0.8355
J_new = 0.8226
J_new = 0.8141
J_new = 0.8114
J_new = 0.8100
J_new = 0.8057
J_new = 0.8009
J_new = 0.7853
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.7679
Iteration 20: error is 37.3507
Iteration 30: error is 36.5667
Iteration 40: error is 36.7907
Iteration 50: error is 36.8736
Iteration 60: error is 37.3618
Iteration 70: error is 37.2017
Iteration 80: error is 36.8791
Iteration 90: error is 37.3556
Iteration 100: error is 2.1849
Iteration 110: error is 1.2315
Iteration 120: error is 0.83059
Iteration 130: error is 0.77483
Iteration 140: error is 0.71885
Iteration 150: error is 0.6836
Iteration 160: error is 0.6774
Iteration 170: error is 0.67287
Iteration 180: error is 0.66907
Iteration 190: error is 0.66637
Iteration 200: error is 0.66342
Iteration 210: error is 0.66157
Iteration 220: error is 0.66003
Iteration 230: error is 0.65869
Iteration 240: error is 0.6576
Iteration 250: error is 0.65666
Iteration 260: error is 0.65523
Iteration 270: error is 0.65363
Iteration 280: error is 0.65248
Iteration 290: error is 0.65164
Iteration 300: error is 0.65099
Iteration 310: error is 0.65051
Iteration 320: error is 0.65012
Iteration 330: error is 0.6498
Iteration 340: error is 0.64955
Iteration 350: error is 0.64935
Iteration 360: error is 0.64917
Iteration 370: error is 0.64903
Iteration 380: error is 0.6489
Iteration 390: error is 0.6488
Iteration 400: error is 0.64871
Iteration 410: error is 0.64863
Iteration 420: error is 0.64857
Iteration 430: error is 0.64851
```

```
Iteration 440: error is 0.64846
Iteration 450: error is 0.64842
Iteration 460: error is 0.64838
Iteration 470: error is 0.64834
Iteration 480: error is 0.64831
Iteration 490: error is 0.64828
Iteration 500: error is 0.64826
Iteration 510: error is 0.64824
Iteration 520: error is 0.64822
Iteration 530: error is 0.6482
Iteration 540: error is 0.64818
Iteration 550: error is 0.64817
Iteration 560: error is 0.64815
Iteration 570: error is 0.64814
Iteration 580: error is 0.64813
Iteration 590: error is 0.64812
Iteration 600: error is 0.64811
Iteration 610: error is 0.6481
Iteration 620: error is 0.6481
Iteration 630: error is 0.64809
Iteration 640: error is 0.64808
Iteration 650: error is 0.64808
Iteration 660: error is 0.64807
Iteration 670: error is 0.64806
Iteration 680: error is 0.64806
Iteration 690: error is 0.64806
Iteration 700: error is 0.64805
Iteration 710: error is 0.64805
Iteration 720: error is 0.64804
Iteration 730: error is 0.64804
Iteration 740: error is 0.64804
Iteration 750: error is 0.64803
Iteration 760: error is 0.64803
Iteration 770: error is 0.64803
Iteration 780: error is 0.64803
Iteration 790: error is 0.64802
Iteration 800: error is 0.64802
Iteration 810: error is 0.64802
Iteration 820: error is 0.64802
Iteration 830: error is 0.64802
Iteration 840: error is 0.64801
Iteration 850: error is 0.64801
Iteration 860: error is 0.64801
Iteration 870: error is 0.64801
Iteration 880: error is 0.64801
Iteration 890: error is 0.64801
Iteration 900: error is 0.648
Iteration 910: error is 0.648
Iteration 920: error is 0.648
Iteration 930: error is 0.648
Iteration 940: error is 0.648
Iteration 950: error is 0.648
Iteration 960: error is 0.648
Iteration 970: error is 0.648
Iteration 980: error is 0.648
Iteration 990: error is 0.648
Iteration 1000: error is 0.648
J_new = 0.8719
J_new = 0.8356
J_new = 0.8232
J_new = 0.8142
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
```

```
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0747
Iteration 20: error is 36.8173
Iteration 30: error is 36.5966
Iteration 40: error is 36.4102
Iteration 50: error is 36.6111
Iteration 60: error is 37.2548
Iteration 70: error is 37.5141
Iteration 80: error is 37.4126
Iteration 90: error is 37.415
Iteration 100: error is 2.2661
Iteration 110: error is 1.3192
Iteration 120: error is 0.87882
Iteration 130: error is 0.71054
Iteration 140: error is 0.6834
Iteration 150: error is 0.67329
Iteration 160: error is 0.66536
Iteration 170: error is 0.65997
Iteration 180: error is 0.65613
Iteration 190: error is 0.65344
Iteration 200: error is 0.65122
Iteration 210: error is 0.6495
Iteration 220: error is 0.648
Iteration 230: error is 0.64672
Iteration 240: error is 0.64567
Iteration 250: error is 0.64474
Iteration 260: error is 0.6433
Iteration 270: error is 0.64177
Iteration 280: error is 0.6406
Iteration 290: error is 0.63972
Iteration 300: error is 0.6391
Iteration 310: error is 0.63861
Iteration 320: error is 0.63821
Iteration 330: error is 0.63788
Iteration 340: error is 0.63763
Iteration 350: error is 0.63743
Iteration 360: error is 0.63726
Iteration 370: error is 0.63712
Iteration 380: error is 0.637
Iteration 390: error is 0.6369
Iteration 400: error is 0.63681
Iteration 410: error is 0.63674
Iteration 420: error is 0.63668
Iteration 430: error is 0.63662
Iteration 440: error is 0.63658
Iteration 450: error is 0.63653
Iteration 460: error is 0.6365
Iteration 470: error is 0.63647
Iteration 480: error is 0.63644
Iteration 490: error is 0.63642
Iteration 500: error is 0.6364
Iteration 510: error is 0.63638
Iteration 520: error is 0.63636
Iteration 530: error is 0.63635
Iteration 540: error is 0.63634
Iteration 550: error is 0.63633
Iteration 560: error is 0.63632
Iteration 570: error is 0.63631
Iteration 580: error is 0.6363
```

```
Iteration 590: error is 0.63629
Iteration 600: error is 0.63629
Iteration 610: error is 0.63628
Iteration 620: error is 0.63628
Iteration 630: error is 0.63627
Iteration 640: error is 0.63626
Iteration 650: error is 0.63626
Iteration 660: error is 0.63626
Iteration 670: error is 0.63625
Iteration 680: error is 0.63625
Iteration 690: error is 0.63625
Iteration 700: error is 0.63625
Iteration 710: error is 0.63624
Iteration 720: error is 0.63624
Iteration 730: error is 0.63624
Iteration 740: error is 0.63624
Iteration 750: error is 0.63624
Iteration 760: error is 0.63624
Iteration 770: error is 0.63624
Iteration 780: error is 0.63623
Iteration 790: error is 0.63623
Iteration 800: error is 0.63623
Iteration 810: error is 0.63623
Iteration 820: error is 0.63623
Iteration 830: error is 0.63623
Iteration 840: error is 0.63623
Iteration 850: error is 0.63623
Iteration 860: error is 0.63623
Iteration 870: error is 0.63623
Iteration 880: error is 0.63623
Iteration 890: error is 0.63623
Iteration 900: error is 0.63623
Iteration 910: error is 0.63623
Iteration 920: error is 0.63623
Iteration 930: error is 0.63623
Iteration 940: error is 0.63623
Iteration 950: error is 0.63623
Iteration 960: error is 0.63623
Iteration 970: error is 0.63623
Iteration 980: error is 0.63623
Iteration 990: error is 0.63623
Iteration 1000: error is 0.63623
J_new = 0.8403
J_new = 0.8264
J_new = 0.8143
J_new = 0.8112
J_new = 0.8098
J_new = 0.8054
J_new = 0.8006
J_new = 0.7851
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0406
Iteration 20: error is 36.9633
Iteration 30: error is 36.7766
Iteration 40: error is 37.2961
Iteration 50: error is 37.4326
Iteration 60: error is 36.6668
Iteration 70: error is 36.9757
Iteration 80: error is 37.3598
Iteration 90: error is 37.4515
```

Iteration 100: error is 2.1184
Iteration 110: error is 1.2541
Iteration 120: error is 0.83447
Iteration 130: error is 0.72278
Iteration 140: error is 0.67655
Iteration 150: error is 0.66604
Iteration 160: error is 0.65928
Iteration 170: error is 0.65442
Iteration 180: error is 0.65075
Iteration 190: error is 0.64889
Iteration 200: error is 0.64577
Iteration 210: error is 0.64393
Iteration 220: error is 0.64245
Iteration 230: error is 0.64112
Iteration 240: error is 0.63994
Iteration 250: error is 0.63907
Iteration 260: error is 0.63762
Iteration 270: error is 0.63603
Iteration 280: error is 0.6349
Iteration 290: error is 0.6341
Iteration 300: error is 0.63347
Iteration 310: error is 0.63299
Iteration 320: error is 0.63261
Iteration 330: error is 0.63231
Iteration 340: error is 0.63207
Iteration 350: error is 0.63187
Iteration 360: error is 0.63171
Iteration 370: error is 0.63159
Iteration 380: error is 0.63147
Iteration 390: error is 0.63138
Iteration 400: error is 0.6313
Iteration 410: error is 0.63123
Iteration 420: error is 0.63117
Iteration 430: error is 0.63112
Iteration 440: error is 0.63108
Iteration 450: error is 0.63104
Iteration 460: error is 0.63101
Iteration 470: error is 0.63098
Iteration 480: error is 0.63095
Iteration 490: error is 0.63093
Iteration 500: error is 0.63091
Iteration 510: error is 0.6309
Iteration 520: error is 0.63088
Iteration 530: error is 0.63087
Iteration 540: error is 0.63086
Iteration 550: error is 0.63085
Iteration 560: error is 0.63084
Iteration 570: error is 0.63083
Iteration 580: error is 0.63082
Iteration 590: error is 0.63082
Iteration 600: error is 0.63081
Iteration 610: error is 0.63081
Iteration 620: error is 0.6308
Iteration 630: error is 0.6308
Iteration 640: error is 0.6308
Iteration 650: error is 0.63079
Iteration 660: error is 0.63079
Iteration 670: error is 0.63079
Iteration 680: error is 0.63079
Iteration 690: error is 0.63078
Iteration 700: error is 0.63078
Iteration 710: error is 0.63078
Iteration 720: error is 0.63078
Iteration 730: error is 0.63078
Iteration 740: error is 0.63078

```
Iteration 750: error is 0.63078
Iteration 760: error is 0.63078
Iteration 770: error is 0.63077
Iteration 780: error is 0.63077
Iteration 790: error is 0.63077
Iteration 800: error is 0.63077
Iteration 810: error is 0.63077
Iteration 820: error is 0.63077
Iteration 830: error is 0.63077
Iteration 840: error is 0.63077
Iteration 850: error is 0.63077
Iteration 860: error is 0.63077
Iteration 870: error is 0.63077
Iteration 880: error is 0.63077
Iteration 890: error is 0.63077
Iteration 900: error is 0.63077
Iteration 910: error is 0.63077
Iteration 920: error is 0.63077
Iteration 930: error is 0.63077
Iteration 940: error is 0.63077
Iteration 950: error is 0.63077
Iteration 960: error is 0.63077
Iteration 970: error is 0.63077
Iteration 980: error is 0.63077
Iteration 990: error is 0.63077
Iteration 1000: error is 0.63077
J_new = 0.8337
J_new = 0.8188
J_new = 0.8167
J_new = 0.8161
J_new = 0.8139
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.7144
Iteration 20: error is 36.3957
Iteration 30: error is 36.7831
Iteration 40: error is 37.2961
Iteration 50: error is 37.013
Iteration 60: error is 36.7316
Iteration 70: error is 37.5094
Iteration 80: error is 36.7513
Iteration 90: error is 37.1396
Iteration 100: error is 2.2085
Iteration 110: error is 1.1786
Iteration 120: error is 0.79568
Iteration 130: error is 0.70119
Iteration 140: error is 0.68244
Iteration 150: error is 0.67303
Iteration 160: error is 0.66632
Iteration 170: error is 0.66147
Iteration 180: error is 0.65807
Iteration 190: error is 0.65533
Iteration 200: error is 0.65316
Iteration 210: error is 0.65133
Iteration 220: error is 0.64983
```

Iteration 230: error is 0.64858
Iteration 240: error is 0.64757
Iteration 250: error is 0.64662
Iteration 260: error is 0.64519
Iteration 270: error is 0.64363
Iteration 280: error is 0.64251
Iteration 290: error is 0.64169
Iteration 300: error is 0.64062
Iteration 310: error is 0.64004
Iteration 320: error is 0.63966
Iteration 330: error is 0.63936
Iteration 340: error is 0.63912
Iteration 350: error is 0.63891
Iteration 360: error is 0.63874
Iteration 370: error is 0.63859
Iteration 380: error is 0.63847
Iteration 390: error is 0.63836
Iteration 400: error is 0.63827
Iteration 410: error is 0.6382
Iteration 420: error is 0.63813
Iteration 430: error is 0.63808
Iteration 440: error is 0.63803
Iteration 450: error is 0.63799
Iteration 460: error is 0.63795
Iteration 470: error is 0.63791
Iteration 480: error is 0.63787
Iteration 490: error is 0.63785
Iteration 500: error is 0.63782
Iteration 510: error is 0.6378
Iteration 520: error is 0.63779
Iteration 530: error is 0.63777
Iteration 540: error is 0.63776
Iteration 550: error is 0.63775
Iteration 560: error is 0.63774
Iteration 570: error is 0.63773
Iteration 580: error is 0.63772
Iteration 590: error is 0.63771
Iteration 600: error is 0.6377
Iteration 610: error is 0.6377
Iteration 620: error is 0.63769
Iteration 630: error is 0.63769
Iteration 640: error is 0.63768
Iteration 650: error is 0.63768
Iteration 660: error is 0.63767
Iteration 670: error is 0.63767
Iteration 680: error is 0.63767
Iteration 690: error is 0.63766
Iteration 700: error is 0.63766
Iteration 710: error is 0.63766
Iteration 720: error is 0.63766
Iteration 730: error is 0.63766
Iteration 740: error is 0.63765
Iteration 750: error is 0.63765
Iteration 760: error is 0.63765
Iteration 770: error is 0.63765
Iteration 780: error is 0.63765
Iteration 790: error is 0.63765
Iteration 800: error is 0.63765
Iteration 810: error is 0.63765
Iteration 820: error is 0.63764
Iteration 830: error is 0.63764
Iteration 840: error is 0.63764
Iteration 850: error is 0.63764
Iteration 860: error is 0.63764
Iteration 870: error is 0.63764

```
Iteration 880: error is 0.63764
Iteration 890: error is 0.63764
Iteration 900: error is 0.63764
Iteration 910: error is 0.63764
Iteration 920: error is 0.63764
Iteration 930: error is 0.63764
Iteration 940: error is 0.63764
Iteration 950: error is 0.63764
Iteration 960: error is 0.63764
Iteration 970: error is 0.63764
Iteration 980: error is 0.63764
Iteration 990: error is 0.63764
Iteration 1000: error is 0.63764
J_new = 0.8418
J_new = 0.8272
J_new = 0.8144
J_new = 0.8112
J_new = 0.8098
J_new = 0.8054
J_new = 0.8006
J_new = 0.7851
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9294
Iteration 20: error is 36.613
Iteration 30: error is 36.5516
Iteration 40: error is 37.1383
Iteration 50: error is 36.606
Iteration 60: error is 37.5748
Iteration 70: error is 37.4938
Iteration 80: error is 36.9752
Iteration 90: error is 36.8942
Iteration 100: error is 2.2612
Iteration 110: error is 1.2864
Iteration 120: error is 0.86115
Iteration 130: error is 0.73306
Iteration 140: error is 0.67962
Iteration 150: error is 0.66796
Iteration 160: error is 0.66135
Iteration 170: error is 0.65675
Iteration 180: error is 0.65312
Iteration 190: error is 0.65028
Iteration 200: error is 0.64816
Iteration 210: error is 0.64618
Iteration 220: error is 0.64464
Iteration 230: error is 0.64339
Iteration 240: error is 0.64234
Iteration 250: error is 0.64154
Iteration 260: error is 0.64009
Iteration 270: error is 0.63863
Iteration 280: error is 0.63752
Iteration 290: error is 0.63667
Iteration 300: error is 0.63604
Iteration 310: error is 0.63555
Iteration 320: error is 0.63516
Iteration 330: error is 0.63486
Iteration 340: error is 0.63461
Iteration 350: error is 0.63441
Iteration 360: error is 0.63424
Iteration 370: error is 0.6341
Iteration 380: error is 0.63399
```

```
Iteration 390: error is 0.63389
Iteration 400: error is 0.63381
Iteration 410: error is 0.63374
Iteration 420: error is 0.63368
Iteration 430: error is 0.63363
Iteration 440: error is 0.63358
Iteration 450: error is 0.63354
Iteration 460: error is 0.63351
Iteration 470: error is 0.63348
Iteration 480: error is 0.63345
Iteration 490: error is 0.63343
Iteration 500: error is 0.63341
Iteration 510: error is 0.63339
Iteration 520: error is 0.63338
Iteration 530: error is 0.63336
Iteration 540: error is 0.63335
Iteration 550: error is 0.63334
Iteration 560: error is 0.63333
Iteration 570: error is 0.63332
Iteration 580: error is 0.63332
Iteration 590: error is 0.63331
Iteration 600: error is 0.63331
Iteration 610: error is 0.6333
Iteration 620: error is 0.6333
Iteration 630: error is 0.63329
Iteration 640: error is 0.63329
Iteration 650: error is 0.63329
Iteration 660: error is 0.63328
Iteration 670: error is 0.63328
Iteration 680: error is 0.63328
Iteration 690: error is 0.63328
Iteration 700: error is 0.63327
Iteration 710: error is 0.63327
Iteration 720: error is 0.63327
Iteration 730: error is 0.63327
Iteration 740: error is 0.63327
Iteration 750: error is 0.63327
Iteration 760: error is 0.63327
Iteration 770: error is 0.63326
Iteration 780: error is 0.63326
Iteration 790: error is 0.63326
Iteration 800: error is 0.63326
Iteration 810: error is 0.63326
Iteration 820: error is 0.63326
Iteration 830: error is 0.63326
Iteration 840: error is 0.63326
Iteration 850: error is 0.63326
Iteration 860: error is 0.63326
Iteration 870: error is 0.63326
Iteration 880: error is 0.63326
Iteration 890: error is 0.63326
Iteration 900: error is 0.63326
Iteration 910: error is 0.63326
Iteration 920: error is 0.63326
Iteration 930: error is 0.63326
Iteration 940: error is 0.63326
Iteration 950: error is 0.63326
Iteration 960: error is 0.63326
Iteration 970: error is 0.63326
Iteration 980: error is 0.63326
Iteration 990: error is 0.63326
Iteration 1000: error is 0.63326
J_new = 0.8433
J_new = 0.8272
J_new = 0.8165
```

```
J_new = 0.8150
J_new = 0.8145
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0759
Iteration 20: error is 37.0911
Iteration 30: error is 36.3741
Iteration 40: error is 36.617
Iteration 50: error is 36.5552
Iteration 60: error is 37.0265
Iteration 70: error is 37.6932
Iteration 80: error is 37.9738
Iteration 90: error is 37.8111
Iteration 100: error is 2.2009
Iteration 110: error is 1.4102
Iteration 120: error is 0.97144
Iteration 130: error is 0.86485
Iteration 140: error is 0.74726
Iteration 150: error is 0.72871
Iteration 160: error is 0.69472
Iteration 170: error is 0.66922
Iteration 180: error is 0.66536
Iteration 190: error is 0.66248
Iteration 200: error is 0.66023
Iteration 210: error is 0.65837
Iteration 220: error is 0.6569
Iteration 230: error is 0.65566
Iteration 240: error is 0.6546
Iteration 250: error is 0.6537
Iteration 260: error is 0.65228
Iteration 270: error is 0.65079
Iteration 280: error is 0.64971
Iteration 290: error is 0.6489
Iteration 300: error is 0.64819
Iteration 310: error is 0.64421
Iteration 320: error is 0.63743
Iteration 330: error is 0.63701
Iteration 340: error is 0.63363
Iteration 350: error is 0.63309
Iteration 360: error is 0.63278
Iteration 370: error is 0.63254
Iteration 380: error is 0.63241
Iteration 390: error is 0.63229
Iteration 400: error is 0.6322
Iteration 410: error is 0.6321
Iteration 420: error is 0.63202
Iteration 430: error is 0.63196
Iteration 440: error is 0.63191
Iteration 450: error is 0.63186
Iteration 460: error is 0.63181
Iteration 470: error is 0.63178
Iteration 480: error is 0.63174
Iteration 490: error is 0.63172
Iteration 500: error is 0.63169
Iteration 510: error is 0.63167
Iteration 520: error is 0.63165
```

```
Iteration 530: error is 0.63163
Iteration 540: error is 0.63162
Iteration 550: error is 0.63161
Iteration 560: error is 0.6316
Iteration 570: error is 0.63159
Iteration 580: error is 0.63158
Iteration 590: error is 0.63157
Iteration 600: error is 0.63156
Iteration 610: error is 0.63156
Iteration 620: error is 0.63155
Iteration 630: error is 0.63154
Iteration 640: error is 0.63154
Iteration 650: error is 0.63154
Iteration 660: error is 0.63153
Iteration 670: error is 0.63153
Iteration 680: error is 0.63153
Iteration 690: error is 0.63152
Iteration 700: error is 0.63152
Iteration 710: error is 0.63152
Iteration 720: error is 0.63152
Iteration 730: error is 0.63152
Iteration 740: error is 0.63151
Iteration 750: error is 0.63151
Iteration 760: error is 0.63151
Iteration 770: error is 0.63151
Iteration 780: error is 0.63151
Iteration 790: error is 0.63151
Iteration 800: error is 0.63151
Iteration 810: error is 0.63151
Iteration 820: error is 0.63151
Iteration 830: error is 0.63151
Iteration 840: error is 0.63151
Iteration 850: error is 0.63151
Iteration 860: error is 0.63151
Iteration 870: error is 0.63151
Iteration 880: error is 0.63151
Iteration 890: error is 0.6315
Iteration 900: error is 0.6315
Iteration 910: error is 0.6315
Iteration 920: error is 0.6315
Iteration 930: error is 0.6315
Iteration 940: error is 0.6315
Iteration 950: error is 0.6315
Iteration 960: error is 0.6315
Iteration 970: error is 0.6315
Iteration 980: error is 0.6315
Iteration 990: error is 0.6315
Iteration 1000: error is 0.6315
J_new = 0.8438
J_new = 0.8275
J_new = 0.8163
J_new = 0.8143
J_new = 0.8118
J_new = 0.8075
J_new = 0.8059
J_new = 0.8014
J_new = 0.7861
J_new = 0.7421
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9486
Iteration 20: error is 37.028
Iteration 30: error is 36.7487
```

Iteration 40: error is 37.0932
Iteration 50: error is 37.1127
Iteration 60: error is 36.9593
Iteration 70: error is 37.3993
Iteration 80: error is 37.2212
Iteration 90: error is 37.3858
Iteration 100: error is 2.4372
Iteration 110: error is 1.2579
Iteration 120: error is 1.0035
Iteration 130: error is 0.81558
Iteration 140: error is 0.75164
Iteration 150: error is 0.71645
Iteration 160: error is 0.68568
Iteration 170: error is 0.66501
Iteration 180: error is 0.66029
Iteration 190: error is 0.65768
Iteration 200: error is 0.65556
Iteration 210: error is 0.65386
Iteration 220: error is 0.6525
Iteration 230: error is 0.65133
Iteration 240: error is 0.65034
Iteration 250: error is 0.6495
Iteration 260: error is 0.64816
Iteration 270: error is 0.64671
Iteration 280: error is 0.64568
Iteration 290: error is 0.64493
Iteration 300: error is 0.64437
Iteration 310: error is 0.64392
Iteration 320: error is 0.64356
Iteration 330: error is 0.64327
Iteration 340: error is 0.64304
Iteration 350: error is 0.64286
Iteration 360: error is 0.64271
Iteration 370: error is 0.64258
Iteration 380: error is 0.64248
Iteration 390: error is 0.6424
Iteration 400: error is 0.64232
Iteration 410: error is 0.64225
Iteration 420: error is 0.6422
Iteration 430: error is 0.64215
Iteration 440: error is 0.64211
Iteration 450: error is 0.64207
Iteration 460: error is 0.64204
Iteration 470: error is 0.64201
Iteration 480: error is 0.64199
Iteration 490: error is 0.64197
Iteration 500: error is 0.64195
Iteration 510: error is 0.64193
Iteration 520: error is 0.64192
Iteration 530: error is 0.64191
Iteration 540: error is 0.6419
Iteration 550: error is 0.64189
Iteration 560: error is 0.64188
Iteration 570: error is 0.64187
Iteration 580: error is 0.64186
Iteration 590: error is 0.64186
Iteration 600: error is 0.64185
Iteration 610: error is 0.64185
Iteration 620: error is 0.64184
Iteration 630: error is 0.64184
Iteration 640: error is 0.64184
Iteration 650: error is 0.64183
Iteration 660: error is 0.64183
Iteration 670: error is 0.64183
Iteration 680: error is 0.64183

```
Iteration 690: error is 0.64182
Iteration 700: error is 0.64182
Iteration 710: error is 0.64182
Iteration 720: error is 0.64182
Iteration 730: error is 0.64182
Iteration 740: error is 0.64182
Iteration 750: error is 0.64182
Iteration 760: error is 0.64181
Iteration 770: error is 0.64181
Iteration 780: error is 0.64181
Iteration 790: error is 0.64181
Iteration 800: error is 0.64181
Iteration 810: error is 0.64181
Iteration 820: error is 0.64181
Iteration 830: error is 0.64181
Iteration 840: error is 0.64181
Iteration 850: error is 0.64181
Iteration 860: error is 0.64181
Iteration 870: error is 0.64181
Iteration 880: error is 0.64181
Iteration 890: error is 0.64181
Iteration 900: error is 0.64181
Iteration 910: error is 0.64181
Iteration 920: error is 0.64181
Iteration 930: error is 0.64181
Iteration 940: error is 0.64181
Iteration 950: error is 0.64181
Iteration 960: error is 0.64181
Iteration 970: error is 0.64181
Iteration 980: error is 0.64181
Iteration 990: error is 0.64181
Iteration 1000: error is 0.64181
J_new = 0.8445
J_new = 0.8275
J_new = 0.8175
J_new = 0.8164
J_new = 0.8160
J_new = 0.8138
J_new = 0.8119
J_new = 0.8083
J_new = 0.8064
J_new = 0.8026
J_new = 0.7908
J_new = 0.7815
J_new = 0.7429
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2155
Iteration 20: error is 37.0698
Iteration 30: error is 36.3951
Iteration 40: error is 36.6675
Iteration 50: error is 37.0864
Iteration 60: error is 37.3494
Iteration 70: error is 37.6428
Iteration 80: error is 37.2113
Iteration 90: error is 37.2301
Iteration 100: error is 2.1775
Iteration 110: error is 1.2553
Iteration 120: error is 0.83043
Iteration 130: error is 0.72738
Iteration 140: error is 0.68736
Iteration 150: error is 0.67756
```

Iteration 160: error is 0.67118
Iteration 170: error is 0.66646
Iteration 180: error is 0.66297
Iteration 190: error is 0.66024
Iteration 200: error is 0.6581
Iteration 210: error is 0.65634
Iteration 220: error is 0.65488
Iteration 230: error is 0.65369
Iteration 240: error is 0.65267
Iteration 250: error is 0.65178
Iteration 260: error is 0.65033
Iteration 270: error is 0.64877
Iteration 280: error is 0.64767
Iteration 290: error is 0.6469
Iteration 300: error is 0.64625
Iteration 310: error is 0.6458
Iteration 320: error is 0.64544
Iteration 330: error is 0.64515
Iteration 340: error is 0.6449
Iteration 350: error is 0.64471
Iteration 360: error is 0.64455
Iteration 370: error is 0.64441
Iteration 380: error is 0.6443
Iteration 390: error is 0.64421
Iteration 400: error is 0.64412
Iteration 410: error is 0.64405
Iteration 420: error is 0.64399
Iteration 430: error is 0.64394
Iteration 440: error is 0.6439
Iteration 450: error is 0.64386
Iteration 460: error is 0.64383
Iteration 470: error is 0.6438
Iteration 480: error is 0.64377
Iteration 490: error is 0.64375
Iteration 500: error is 0.64373
Iteration 510: error is 0.64371
Iteration 520: error is 0.6437
Iteration 530: error is 0.64368
Iteration 540: error is 0.64367
Iteration 550: error is 0.64366
Iteration 560: error is 0.64365
Iteration 570: error is 0.64364
Iteration 580: error is 0.64364
Iteration 590: error is 0.64363
Iteration 600: error is 0.64362
Iteration 610: error is 0.64362
Iteration 620: error is 0.64361
Iteration 630: error is 0.64361
Iteration 640: error is 0.64361
Iteration 650: error is 0.6436
Iteration 660: error is 0.6436
Iteration 670: error is 0.6436
Iteration 680: error is 0.6436
Iteration 690: error is 0.64359
Iteration 700: error is 0.64359
Iteration 710: error is 0.64359
Iteration 720: error is 0.64359
Iteration 730: error is 0.64359
Iteration 740: error is 0.64359
Iteration 750: error is 0.64358
Iteration 760: error is 0.64358
Iteration 770: error is 0.64358
Iteration 780: error is 0.64358
Iteration 790: error is 0.64358
Iteration 800: error is 0.64358

```
Iteration 810: error is 0.64358
Iteration 820: error is 0.64358
Iteration 830: error is 0.64358
Iteration 840: error is 0.64358
Iteration 850: error is 0.64358
Iteration 860: error is 0.64358
Iteration 870: error is 0.64358
Iteration 880: error is 0.64358
Iteration 890: error is 0.64358
Iteration 900: error is 0.64358
Iteration 910: error is 0.64358
Iteration 920: error is 0.64358
Iteration 930: error is 0.64358
Iteration 940: error is 0.64358
Iteration 950: error is 0.64358
Iteration 960: error is 0.64358
Iteration 970: error is 0.64358
Iteration 980: error is 0.64358
Iteration 990: error is 0.64358
Iteration 1000: error is 0.64358
J_new = 0.8581
J_new = 0.8277
J_new = 0.8162
J_new = 0.8142
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8041
Iteration 20: error is 36.8925
Iteration 30: error is 36.6773
Iteration 40: error is 36.9079
Iteration 50: error is 37.001
Iteration 60: error is 36.9916
Iteration 70: error is 36.5
Iteration 80: error is 36.9617
Iteration 90: error is 37.45
Iteration 100: error is 2.1633
Iteration 110: error is 1.2195
Iteration 120: error is 0.89819
Iteration 130: error is 0.72012
Iteration 140: error is 0.67534
Iteration 150: error is 0.66253
Iteration 160: error is 0.65399
Iteration 170: error is 0.64835
Iteration 180: error is 0.64501
Iteration 190: error is 0.6422
Iteration 200: error is 0.64002
Iteration 210: error is 0.63817
Iteration 220: error is 0.6367
Iteration 230: error is 0.63546
Iteration 240: error is 0.63442
Iteration 250: error is 0.63354
Iteration 260: error is 0.63214
Iteration 270: error is 0.63056
Iteration 280: error is 0.62943
Iteration 290: error is 0.62863
```

Iteration 300: error is 0.628
Iteration 310: error is 0.62749
Iteration 320: error is 0.62711
Iteration 330: error is 0.6268
Iteration 340: error is 0.62654
Iteration 350: error is 0.62632
Iteration 360: error is 0.62615
Iteration 370: error is 0.62601
Iteration 380: error is 0.62589
Iteration 390: error is 0.62578
Iteration 400: error is 0.62569
Iteration 410: error is 0.62562
Iteration 420: error is 0.62556
Iteration 430: error is 0.6255
Iteration 440: error is 0.62545
Iteration 450: error is 0.62541
Iteration 460: error is 0.62537
Iteration 470: error is 0.62534
Iteration 480: error is 0.62531
Iteration 490: error is 0.62528
Iteration 500: error is 0.62526
Iteration 510: error is 0.62524
Iteration 520: error is 0.62523
Iteration 530: error is 0.62521
Iteration 540: error is 0.6252
Iteration 550: error is 0.62519
Iteration 560: error is 0.62517
Iteration 570: error is 0.62517
Iteration 580: error is 0.62516
Iteration 590: error is 0.62515
Iteration 600: error is 0.62514
Iteration 610: error is 0.62514
Iteration 620: error is 0.62513
Iteration 630: error is 0.62513
Iteration 640: error is 0.62512
Iteration 650: error is 0.62512
Iteration 660: error is 0.62511
Iteration 670: error is 0.62511
Iteration 680: error is 0.62511
Iteration 690: error is 0.62511
Iteration 700: error is 0.6251
Iteration 710: error is 0.6251
Iteration 720: error is 0.6251
Iteration 730: error is 0.6251
Iteration 740: error is 0.6251
Iteration 750: error is 0.6251
Iteration 760: error is 0.62509
Iteration 770: error is 0.62509
Iteration 780: error is 0.62509
Iteration 790: error is 0.62509
Iteration 800: error is 0.62509
Iteration 810: error is 0.62509
Iteration 820: error is 0.62509
Iteration 830: error is 0.62509
Iteration 840: error is 0.62509
Iteration 850: error is 0.62509
Iteration 860: error is 0.62509
Iteration 870: error is 0.62509
Iteration 880: error is 0.62509
Iteration 890: error is 0.62509
Iteration 900: error is 0.62509
Iteration 910: error is 0.62509
Iteration 920: error is 0.62509
Iteration 930: error is 0.62508
Iteration 940: error is 0.62508

```
Iteration 950: error is 0.62508
Iteration 960: error is 0.62508
Iteration 970: error is 0.62508
Iteration 980: error is 0.62508
Iteration 990: error is 0.62508
Iteration 1000: error is 0.62508
J_new = 0.8707
J_new = 0.8456
J_new = 0.8216
J_new = 0.8097
J_new = 0.8063
J_new = 0.8014
J_new = 0.7857
J_new = 0.7434
J_new = 0.7420
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9661
Iteration 20: error is 36.8949
Iteration 30: error is 36.7596
Iteration 40: error is 36.8484
Iteration 50: error is 37.3603
Iteration 60: error is 37.3691
Iteration 70: error is 37.3519
Iteration 80: error is 37.4676
Iteration 90: error is 37.1931
Iteration 100: error is 2.1281
Iteration 110: error is 1.104
Iteration 120: error is 0.84851
Iteration 130: error is 0.70205
Iteration 140: error is 0.67538
Iteration 150: error is 0.66496
Iteration 160: error is 0.65774
Iteration 170: error is 0.65289
Iteration 180: error is 0.64879
Iteration 190: error is 0.64581
Iteration 200: error is 0.64349
Iteration 210: error is 0.64161
Iteration 220: error is 0.6401
Iteration 230: error is 0.63879
Iteration 240: error is 0.63774
Iteration 250: error is 0.63678
Iteration 260: error is 0.63533
Iteration 270: error is 0.63379
Iteration 280: error is 0.63264
Iteration 290: error is 0.63177
Iteration 300: error is 0.63112
Iteration 310: error is 0.63061
Iteration 320: error is 0.63017
Iteration 330: error is 0.62986
Iteration 340: error is 0.62962
Iteration 350: error is 0.62941
Iteration 360: error is 0.62924
Iteration 370: error is 0.6291
Iteration 380: error is 0.62898
Iteration 390: error is 0.62887
Iteration 400: error is 0.62873
Iteration 410: error is 0.62835
Iteration 420: error is 0.62823
Iteration 430: error is 0.62817
Iteration 440: error is 0.62813
Iteration 450: error is 0.62808
Iteration 460: error is 0.62805
```

```
Iteration 470: error is 0.62801
Iteration 480: error is 0.62798
Iteration 490: error is 0.62796
Iteration 500: error is 0.62794
Iteration 510: error is 0.62792
Iteration 520: error is 0.6279
Iteration 530: error is 0.62788
Iteration 540: error is 0.62787
Iteration 550: error is 0.62786
Iteration 560: error is 0.62785
Iteration 570: error is 0.62784
Iteration 580: error is 0.62783
Iteration 590: error is 0.62782
Iteration 600: error is 0.62782
Iteration 610: error is 0.62781
Iteration 620: error is 0.62781
Iteration 630: error is 0.6278
Iteration 640: error is 0.6278
Iteration 650: error is 0.6278
Iteration 660: error is 0.62779
Iteration 670: error is 0.62779
Iteration 680: error is 0.62779
Iteration 690: error is 0.62778
Iteration 700: error is 0.62778
Iteration 710: error is 0.62778
Iteration 720: error is 0.62778
Iteration 730: error is 0.62778
Iteration 740: error is 0.62778
Iteration 750: error is 0.62777
Iteration 760: error is 0.62777
Iteration 770: error is 0.62777
Iteration 780: error is 0.62777
Iteration 790: error is 0.62777
Iteration 800: error is 0.62777
Iteration 810: error is 0.62777
Iteration 820: error is 0.62777
Iteration 830: error is 0.62777
Iteration 840: error is 0.62777
Iteration 850: error is 0.62777
Iteration 860: error is 0.62777
Iteration 870: error is 0.62777
Iteration 880: error is 0.62777
Iteration 890: error is 0.62777
Iteration 900: error is 0.62777
Iteration 910: error is 0.62777
Iteration 920: error is 0.62777
Iteration 930: error is 0.62777
Iteration 940: error is 0.62777
Iteration 950: error is 0.62777
Iteration 960: error is 0.62777
Iteration 970: error is 0.62777
Iteration 980: error is 0.62777
Iteration 990: error is 0.62777
Iteration 1000: error is 0.62777
J_new = 0.8869
J_new = 0.8686
J_new = 0.8423
J_new = 0.8323
J_new = 0.8245
J_new = 0.8231
J_new = 0.8236
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.0031
```

Iteration 20: error is 37.07
Iteration 30: error is 36.98
Iteration 40: error is 37.1515
Iteration 50: error is 37.1054
Iteration 60: error is 37.673
Iteration 70: error is 37.7294
Iteration 80: error is 37.4417
Iteration 90: error is 37.7253
Iteration 100: error is 2.3627
Iteration 110: error is 1.3071
Iteration 120: error is 0.91144
Iteration 130: error is 0.79092
Iteration 140: error is 0.76544
Iteration 150: error is 0.72054
Iteration 160: error is 0.66075
Iteration 170: error is 0.64912
Iteration 180: error is 0.64509
Iteration 190: error is 0.64336
Iteration 200: error is 0.6404
Iteration 210: error is 0.6387
Iteration 220: error is 0.63727
Iteration 230: error is 0.63604
Iteration 240: error is 0.63503
Iteration 250: error is 0.63414
Iteration 260: error is 0.63272
Iteration 270: error is 0.63124
Iteration 280: error is 0.63014
Iteration 290: error is 0.62931
Iteration 300: error is 0.62865
Iteration 310: error is 0.62815
Iteration 320: error is 0.62776
Iteration 330: error is 0.62743
Iteration 340: error is 0.62717
Iteration 350: error is 0.62696
Iteration 360: error is 0.62678
Iteration 370: error is 0.62664
Iteration 380: error is 0.62651
Iteration 390: error is 0.62641
Iteration 400: error is 0.62632
Iteration 410: error is 0.62624
Iteration 420: error is 0.62618
Iteration 430: error is 0.62612
Iteration 440: error is 0.62607
Iteration 450: error is 0.62603
Iteration 460: error is 0.62599
Iteration 470: error is 0.62596
Iteration 480: error is 0.62593
Iteration 490: error is 0.6259
Iteration 500: error is 0.62588
Iteration 510: error is 0.62586
Iteration 520: error is 0.62585
Iteration 530: error is 0.62583
Iteration 540: error is 0.62582
Iteration 550: error is 0.62581
Iteration 560: error is 0.6258
Iteration 570: error is 0.62579
Iteration 580: error is 0.62578
Iteration 590: error is 0.62577
Iteration 600: error is 0.62576
Iteration 610: error is 0.62576
Iteration 620: error is 0.62575
Iteration 630: error is 0.62575
Iteration 640: error is 0.62574
Iteration 650: error is 0.62574
Iteration 660: error is 0.62574

```
Iteration 670: error is 0.62573
Iteration 680: error is 0.62573
Iteration 690: error is 0.62573
Iteration 700: error is 0.62573
Iteration 710: error is 0.62572
Iteration 720: error is 0.62572
Iteration 730: error is 0.62572
Iteration 740: error is 0.62572
Iteration 750: error is 0.62572
Iteration 760: error is 0.62572
Iteration 770: error is 0.62572
Iteration 780: error is 0.62572
Iteration 790: error is 0.62571
Iteration 800: error is 0.62571
Iteration 810: error is 0.62571
Iteration 820: error is 0.62571
Iteration 830: error is 0.62571
Iteration 840: error is 0.62571
Iteration 850: error is 0.62571
Iteration 860: error is 0.62571
Iteration 870: error is 0.62571
Iteration 880: error is 0.62571
Iteration 890: error is 0.62571
Iteration 900: error is 0.62571
Iteration 910: error is 0.62571
Iteration 920: error is 0.62571
Iteration 930: error is 0.62571
Iteration 940: error is 0.62571
Iteration 950: error is 0.62571
Iteration 960: error is 0.62571
Iteration 970: error is 0.62571
Iteration 980: error is 0.62571
Iteration 990: error is 0.62571
Iteration 1000: error is 0.62571
J_new = 0.8445
J_new = 0.8286
J_new = 0.8175
J_new = 0.8161
J_new = 0.8157
J_new = 0.8134
J_new = 0.8116
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.3024
Iteration 20: error is 36.3673
Iteration 30: error is 36.5907
Iteration 40: error is 37.3132
Iteration 50: error is 37.5048
Iteration 60: error is 37.4122
Iteration 70: error is 36.8569
Iteration 80: error is 37.3148
Iteration 90: error is 37.0435
Iteration 100: error is 2.3376
Iteration 110: error is 1.2815
Iteration 120: error is 0.82773
Iteration 130: error is 0.71003
```

Iteration 140: error is 0.67995
Iteration 150: error is 0.67
Iteration 160: error is 0.66267
Iteration 170: error is 0.65769
Iteration 180: error is 0.6542
Iteration 190: error is 0.65125
Iteration 200: error is 0.64909
Iteration 210: error is 0.64708
Iteration 220: error is 0.64547
Iteration 230: error is 0.64423
Iteration 240: error is 0.64311
Iteration 250: error is 0.64229
Iteration 260: error is 0.64074
Iteration 270: error is 0.63923
Iteration 280: error is 0.63809
Iteration 290: error is 0.63725
Iteration 300: error is 0.63661
Iteration 310: error is 0.6361
Iteration 320: error is 0.6357
Iteration 330: error is 0.63539
Iteration 340: error is 0.63506
Iteration 350: error is 0.63484
Iteration 360: error is 0.63466
Iteration 370: error is 0.63452
Iteration 380: error is 0.63439
Iteration 390: error is 0.63429
Iteration 400: error is 0.6342
Iteration 410: error is 0.63412
Iteration 420: error is 0.63405
Iteration 430: error is 0.634
Iteration 440: error is 0.63395
Iteration 450: error is 0.63391
Iteration 460: error is 0.63387
Iteration 470: error is 0.63384
Iteration 480: error is 0.63381
Iteration 490: error is 0.63378
Iteration 500: error is 0.63376
Iteration 510: error is 0.63374
Iteration 520: error is 0.63372
Iteration 530: error is 0.63371
Iteration 540: error is 0.6337
Iteration 550: error is 0.63369
Iteration 560: error is 0.63367
Iteration 570: error is 0.63367
Iteration 580: error is 0.63366
Iteration 590: error is 0.63365
Iteration 600: error is 0.63364
Iteration 610: error is 0.63364
Iteration 620: error is 0.63363
Iteration 630: error is 0.63363
Iteration 640: error is 0.63362
Iteration 650: error is 0.63362
Iteration 660: error is 0.63362
Iteration 670: error is 0.63361
Iteration 680: error is 0.63361
Iteration 690: error is 0.63361
Iteration 700: error is 0.63361
Iteration 710: error is 0.63361
Iteration 720: error is 0.6336
Iteration 730: error is 0.6336
Iteration 740: error is 0.6336
Iteration 750: error is 0.6336
Iteration 760: error is 0.6336
Iteration 770: error is 0.6336
Iteration 780: error is 0.6336

```
Iteration 790: error is 0.6336
Iteration 800: error is 0.6336
Iteration 810: error is 0.6336
Iteration 820: error is 0.63359
Iteration 830: error is 0.63359
Iteration 840: error is 0.63359
Iteration 850: error is 0.63359
Iteration 860: error is 0.63359
Iteration 870: error is 0.63359
Iteration 880: error is 0.63359
Iteration 890: error is 0.63359
Iteration 900: error is 0.63359
Iteration 910: error is 0.63359
Iteration 920: error is 0.63359
Iteration 930: error is 0.63359
Iteration 940: error is 0.63359
Iteration 950: error is 0.63359
Iteration 960: error is 0.63359
Iteration 970: error is 0.63359
Iteration 980: error is 0.63359
Iteration 990: error is 0.63359
Iteration 1000: error is 0.63359
J_new = 0.8434
J_new = 0.8271
J_new = 0.8160
J_new = 0.8142
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 40.5301
Iteration 20: error is 37.6972
Iteration 30: error is 37.424
Iteration 40: error is 37.3783
Iteration 50: error is 37.2019
Iteration 60: error is 37.8305
Iteration 70: error is 37.8486
Iteration 80: error is 37.4663
Iteration 90: error is 37.3881
Iteration 100: error is 2.3311
Iteration 110: error is 1.1357
Iteration 120: error is 0.76345
Iteration 130: error is 0.70065
Iteration 140: error is 0.68252
Iteration 150: error is 0.67227
Iteration 160: error is 0.66534
Iteration 170: error is 0.66014
Iteration 180: error is 0.65647
Iteration 190: error is 0.65362
Iteration 200: error is 0.65149
Iteration 210: error is 0.6496
Iteration 220: error is 0.64812
Iteration 230: error is 0.64688
Iteration 240: error is 0.64575
Iteration 250: error is 0.64484
Iteration 260: error is 0.64339
Iteration 270: error is 0.64186
```

Iteration 280: error is 0.64078
Iteration 290: error is 0.64001
Iteration 300: error is 0.63938
Iteration 310: error is 0.63889
Iteration 320: error is 0.63851
Iteration 330: error is 0.63819
Iteration 340: error is 0.63792
Iteration 350: error is 0.63762
Iteration 360: error is 0.63715
Iteration 370: error is 0.6369
Iteration 380: error is 0.63675
Iteration 390: error is 0.63665
Iteration 400: error is 0.63657
Iteration 410: error is 0.6365
Iteration 420: error is 0.63643
Iteration 430: error is 0.63637
Iteration 440: error is 0.63632
Iteration 450: error is 0.63627
Iteration 460: error is 0.63623
Iteration 470: error is 0.6362
Iteration 480: error is 0.63617
Iteration 490: error is 0.63615
Iteration 500: error is 0.63613
Iteration 510: error is 0.63611
Iteration 520: error is 0.63609
Iteration 530: error is 0.63607
Iteration 540: error is 0.63606
Iteration 550: error is 0.63605
Iteration 560: error is 0.63604
Iteration 570: error is 0.63603
Iteration 580: error is 0.63602
Iteration 590: error is 0.63602
Iteration 600: error is 0.63601
Iteration 610: error is 0.636
Iteration 620: error is 0.636
Iteration 630: error is 0.636
Iteration 640: error is 0.63599
Iteration 650: error is 0.63599
Iteration 660: error is 0.63599
Iteration 670: error is 0.63598
Iteration 680: error is 0.63598
Iteration 690: error is 0.63598
Iteration 700: error is 0.63598
Iteration 710: error is 0.63598
Iteration 720: error is 0.63597
Iteration 730: error is 0.63597
Iteration 740: error is 0.63597
Iteration 750: error is 0.63597
Iteration 760: error is 0.63597
Iteration 770: error is 0.63597
Iteration 780: error is 0.63597
Iteration 790: error is 0.63597
Iteration 800: error is 0.63597
Iteration 810: error is 0.63597
Iteration 820: error is 0.63597
Iteration 830: error is 0.63596
Iteration 840: error is 0.63596
Iteration 850: error is 0.63596
Iteration 860: error is 0.63596
Iteration 870: error is 0.63596
Iteration 880: error is 0.63596
Iteration 890: error is 0.63596
Iteration 900: error is 0.63596
Iteration 910: error is 0.63596
Iteration 920: error is 0.63596

```
Iteration 930: error is 0.63596
Iteration 940: error is 0.63596
Iteration 950: error is 0.63596
Iteration 960: error is 0.63596
Iteration 970: error is 0.63596
Iteration 980: error is 0.63596
Iteration 990: error is 0.63596
Iteration 1000: error is 0.63596
J_new = 0.8042
J_new = 0.7908
J_new = 0.7674
J_new = 0.7511
J_new = 0.7402
J_new = 0.7398
J_new = 0.7398
J_new = 0.7392
J_new = 0.7398
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4366
Iteration 20: error is 37.0376
Iteration 30: error is 37.8628
Iteration 40: error is 37.1371
Iteration 50: error is 37.1199
Iteration 60: error is 37.5163
Iteration 70: error is 37.6474
Iteration 80: error is 37.9021
Iteration 90: error is 38.4747
Iteration 100: error is 2.406
Iteration 110: error is 1.2224
Iteration 120: error is 0.89284
Iteration 130: error is 0.78947
Iteration 140: error is 0.70578
Iteration 150: error is 0.67772
Iteration 160: error is 0.67077
Iteration 170: error is 0.66607
Iteration 180: error is 0.66278
Iteration 190: error is 0.65994
Iteration 200: error is 0.65807
Iteration 210: error is 0.65608
Iteration 220: error is 0.65463
Iteration 230: error is 0.65334
Iteration 240: error is 0.65228
Iteration 250: error is 0.65137
Iteration 260: error is 0.64993
Iteration 270: error is 0.64838
Iteration 280: error is 0.64729
Iteration 290: error is 0.6465
Iteration 300: error is 0.64588
Iteration 310: error is 0.64541
Iteration 320: error is 0.64504
Iteration 330: error is 0.64476
Iteration 340: error is 0.64451
Iteration 350: error is 0.64432
Iteration 360: error is 0.64416
Iteration 370: error is 0.64403
Iteration 380: error is 0.64392
Iteration 390: error is 0.64383
Iteration 400: error is 0.64375
Iteration 410: error is 0.64368
Iteration 420: error is 0.64362
Iteration 430: error is 0.64357
Iteration 440: error is 0.64353
Iteration 450: error is 0.64349
```

```
Iteration 460: error is 0.64346
Iteration 470: error is 0.64343
Iteration 480: error is 0.64341
Iteration 490: error is 0.64338
Iteration 500: error is 0.64337
Iteration 510: error is 0.64335
Iteration 520: error is 0.64334
Iteration 530: error is 0.64332
Iteration 540: error is 0.64331
Iteration 550: error is 0.6433
Iteration 560: error is 0.64329
Iteration 570: error is 0.64329
Iteration 580: error is 0.64328
Iteration 590: error is 0.64327
Iteration 600: error is 0.64327
Iteration 610: error is 0.64326
Iteration 620: error is 0.64326
Iteration 630: error is 0.64325
Iteration 640: error is 0.64325
Iteration 650: error is 0.64325
Iteration 660: error is 0.64325
Iteration 670: error is 0.64324
Iteration 680: error is 0.64324
Iteration 690: error is 0.64324
Iteration 700: error is 0.64324
Iteration 710: error is 0.64324
Iteration 720: error is 0.64324
Iteration 730: error is 0.64323
Iteration 740: error is 0.64323
Iteration 750: error is 0.64323
Iteration 760: error is 0.64323
Iteration 770: error is 0.64323
Iteration 780: error is 0.64323
Iteration 790: error is 0.64323
Iteration 800: error is 0.64323
Iteration 810: error is 0.64323
Iteration 820: error is 0.64323
Iteration 830: error is 0.64323
Iteration 840: error is 0.64323
Iteration 850: error is 0.64323
Iteration 860: error is 0.64323
Iteration 870: error is 0.64323
Iteration 880: error is 0.64323
Iteration 890: error is 0.64323
Iteration 900: error is 0.64323
Iteration 910: error is 0.64323
Iteration 920: error is 0.64323
Iteration 930: error is 0.64323
Iteration 940: error is 0.64323
Iteration 950: error is 0.64323
Iteration 960: error is 0.64323
Iteration 970: error is 0.64323
Iteration 980: error is 0.64323
Iteration 990: error is 0.64323
Iteration 1000: error is 0.64322
J_new = 0.8338
J_new = 0.8190
J_new = 0.8171
J_new = 0.8163
J_new = 0.8138
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
```

```
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.1308
Iteration 20: error is 37.4706
Iteration 30: error is 37.1978
Iteration 40: error is 36.5332
Iteration 50: error is 37.082
Iteration 60: error is 37.7505
Iteration 70: error is 37.9131
Iteration 80: error is 37.7436
Iteration 90: error is 37.2969
Iteration 100: error is 2.3099
Iteration 110: error is 1.3119
Iteration 120: error is 0.91636
Iteration 130: error is 0.82475
Iteration 140: error is 0.71039
Iteration 150: error is 0.70986
Iteration 160: error is 0.66911
Iteration 170: error is 0.66313
Iteration 180: error is 0.65872
Iteration 190: error is 0.65467
Iteration 200: error is 0.65241
Iteration 210: error is 0.65069
Iteration 220: error is 0.64921
Iteration 230: error is 0.64802
Iteration 240: error is 0.64697
Iteration 250: error is 0.64606
Iteration 260: error is 0.64466
Iteration 270: error is 0.64315
Iteration 280: error is 0.64203
Iteration 290: error is 0.64119
Iteration 300: error is 0.64058
Iteration 310: error is 0.64012
Iteration 320: error is 0.63974
Iteration 330: error is 0.63943
Iteration 340: error is 0.63919
Iteration 350: error is 0.639
Iteration 360: error is 0.63884
Iteration 370: error is 0.63871
Iteration 380: error is 0.63859
Iteration 390: error is 0.6385
Iteration 400: error is 0.63842
Iteration 410: error is 0.63835
Iteration 420: error is 0.63829
Iteration 430: error is 0.63824
Iteration 440: error is 0.6382
Iteration 450: error is 0.63816
Iteration 460: error is 0.63813
Iteration 470: error is 0.6381
Iteration 480: error is 0.63807
Iteration 490: error is 0.63805
Iteration 500: error is 0.63803
Iteration 510: error is 0.63802
Iteration 520: error is 0.638
Iteration 530: error is 0.63799
Iteration 540: error is 0.63798
Iteration 550: error is 0.63797
Iteration 560: error is 0.63796
Iteration 570: error is 0.63795
Iteration 580: error is 0.63794
```

```
Iteration 590: error is 0.63794
Iteration 600: error is 0.63793
Iteration 610: error is 0.63793
Iteration 620: error is 0.63792
Iteration 630: error is 0.63792
Iteration 640: error is 0.63791
Iteration 650: error is 0.63791
Iteration 660: error is 0.63791
Iteration 670: error is 0.63791
Iteration 680: error is 0.6379
Iteration 690: error is 0.6379
Iteration 700: error is 0.6379
Iteration 710: error is 0.6379
Iteration 720: error is 0.6379
Iteration 730: error is 0.6379
Iteration 740: error is 0.63789
Iteration 750: error is 0.63789
Iteration 760: error is 0.63789
Iteration 770: error is 0.63789
Iteration 780: error is 0.63789
Iteration 790: error is 0.63789
Iteration 800: error is 0.63789
Iteration 810: error is 0.63789
Iteration 820: error is 0.63789
Iteration 830: error is 0.63789
Iteration 840: error is 0.63789
Iteration 850: error is 0.63789
Iteration 860: error is 0.63789
Iteration 870: error is 0.63789
Iteration 880: error is 0.63789
Iteration 890: error is 0.63789
Iteration 900: error is 0.63789
Iteration 910: error is 0.63789
Iteration 920: error is 0.63789
Iteration 930: error is 0.63789
Iteration 940: error is 0.63789
Iteration 950: error is 0.63789
Iteration 960: error is 0.63788
Iteration 970: error is 0.63788
Iteration 980: error is 0.63788
Iteration 990: error is 0.63788
Iteration 1000: error is 0.63788
J_new = 0.8431
J_new = 0.8272
J_new = 0.8161
J_new = 0.8143
J_new = 0.8118
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.9882
Iteration 20: error is 37.3113
Iteration 30: error is 37.2559
Iteration 40: error is 37.1388
Iteration 50: error is 36.8151
Iteration 60: error is 36.6855
Iteration 70: error is 37.1353
```

Iteration 80: error is 37.1797
Iteration 90: error is 37.56
Iteration 100: error is 2.1387
Iteration 110: error is 1.2556
Iteration 120: error is 0.90821
Iteration 130: error is 0.70943
Iteration 140: error is 0.69169
Iteration 150: error is 0.66183
Iteration 160: error is 0.65564
Iteration 170: error is 0.65081
Iteration 180: error is 0.64688
Iteration 190: error is 0.64364
Iteration 200: error is 0.64142
Iteration 210: error is 0.63952
Iteration 220: error is 0.63807
Iteration 230: error is 0.6368
Iteration 240: error is 0.63576
Iteration 250: error is 0.63487
Iteration 260: error is 0.63352
Iteration 270: error is 0.63202
Iteration 280: error is 0.63089
Iteration 290: error is 0.63007
Iteration 300: error is 0.62945
Iteration 310: error is 0.62896
Iteration 320: error is 0.62858
Iteration 330: error is 0.62829
Iteration 340: error is 0.62804
Iteration 350: error is 0.62784
Iteration 360: error is 0.62765
Iteration 370: error is 0.6275
Iteration 380: error is 0.62738
Iteration 390: error is 0.62728
Iteration 400: error is 0.62718
Iteration 410: error is 0.6271
Iteration 420: error is 0.62701
Iteration 430: error is 0.62694
Iteration 440: error is 0.62688
Iteration 450: error is 0.62683
Iteration 460: error is 0.62679
Iteration 470: error is 0.62675
Iteration 480: error is 0.62672
Iteration 490: error is 0.62669
Iteration 500: error is 0.62666
Iteration 510: error is 0.62664
Iteration 520: error is 0.62663
Iteration 530: error is 0.62661
Iteration 540: error is 0.6266
Iteration 550: error is 0.62658
Iteration 560: error is 0.62657
Iteration 570: error is 0.62656
Iteration 580: error is 0.62655
Iteration 590: error is 0.62655
Iteration 600: error is 0.62654
Iteration 610: error is 0.62653
Iteration 620: error is 0.62653
Iteration 630: error is 0.62652
Iteration 640: error is 0.62652
Iteration 650: error is 0.62652
Iteration 660: error is 0.62651
Iteration 670: error is 0.62651
Iteration 680: error is 0.62651
Iteration 690: error is 0.62651
Iteration 700: error is 0.6265
Iteration 710: error is 0.6265
Iteration 720: error is 0.6265

```
Iteration 730: error is 0.6265
Iteration 740: error is 0.6265
Iteration 750: error is 0.6265
Iteration 760: error is 0.62649
Iteration 770: error is 0.62649
Iteration 780: error is 0.62649
Iteration 790: error is 0.62649
Iteration 800: error is 0.62649
Iteration 810: error is 0.62649
Iteration 820: error is 0.62649
Iteration 830: error is 0.62649
Iteration 840: error is 0.62649
Iteration 850: error is 0.62649
Iteration 860: error is 0.62649
Iteration 870: error is 0.62649
Iteration 880: error is 0.62649
Iteration 890: error is 0.62649
Iteration 900: error is 0.62649
Iteration 910: error is 0.62649
Iteration 920: error is 0.62649
Iteration 930: error is 0.62649
Iteration 940: error is 0.62649
Iteration 950: error is 0.62649
Iteration 960: error is 0.62649
Iteration 970: error is 0.62649
Iteration 980: error is 0.62649
Iteration 990: error is 0.62649
Iteration 1000: error is 0.62649
J_new = 0.8515
J_new = 0.8261
J_new = 0.8133
J_new = 0.8092
J_new = 0.8067
J_new = 0.7999
J_new = 0.7862
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.856
Iteration 20: error is 37.0662
Iteration 30: error is 36.848
Iteration 40: error is 37.0121
Iteration 50: error is 37.2866
Iteration 60: error is 38.0339
Iteration 70: error is 37.5177
Iteration 80: error is 37.3878
Iteration 90: error is 37.2175
Iteration 100: error is 2.3588
Iteration 110: error is 1.117
Iteration 120: error is 0.79416
Iteration 130: error is 0.69081
Iteration 140: error is 0.67497
Iteration 150: error is 0.66524
Iteration 160: error is 0.65876
Iteration 170: error is 0.65391
Iteration 180: error is 0.6503
Iteration 190: error is 0.64765
Iteration 200: error is 0.64528
Iteration 210: error is 0.64344
Iteration 220: error is 0.64195
Iteration 230: error is 0.64064
Iteration 240: error is 0.63956
Iteration 250: error is 0.63866
```

Iteration 260: error is 0.63715
Iteration 270: error is 0.6356
Iteration 280: error is 0.63445
Iteration 290: error is 0.63356
Iteration 300: error is 0.63285
Iteration 310: error is 0.63228
Iteration 320: error is 0.63161
Iteration 330: error is 0.63119
Iteration 340: error is 0.63064
Iteration 350: error is 0.62907
Iteration 360: error is 0.62857
Iteration 370: error is 0.6283
Iteration 380: error is 0.62816
Iteration 390: error is 0.62806
Iteration 400: error is 0.62797
Iteration 410: error is 0.62788
Iteration 420: error is 0.6278
Iteration 430: error is 0.62774
Iteration 440: error is 0.62768
Iteration 450: error is 0.62763
Iteration 460: error is 0.62758
Iteration 470: error is 0.62755
Iteration 480: error is 0.62751
Iteration 490: error is 0.62748
Iteration 500: error is 0.62746
Iteration 510: error is 0.62744
Iteration 520: error is 0.62741
Iteration 530: error is 0.6274
Iteration 540: error is 0.62738
Iteration 550: error is 0.62737
Iteration 560: error is 0.62736
Iteration 570: error is 0.62735
Iteration 580: error is 0.62734
Iteration 590: error is 0.62733
Iteration 600: error is 0.62732
Iteration 610: error is 0.62731
Iteration 620: error is 0.62731
Iteration 630: error is 0.6273
Iteration 640: error is 0.6273
Iteration 650: error is 0.62729
Iteration 660: error is 0.62729
Iteration 670: error is 0.62728
Iteration 680: error is 0.62728
Iteration 690: error is 0.62728
Iteration 700: error is 0.62728
Iteration 710: error is 0.62727
Iteration 720: error is 0.62727
Iteration 730: error is 0.62727
Iteration 740: error is 0.62727
Iteration 750: error is 0.62727
Iteration 760: error is 0.62726
Iteration 770: error is 0.62726
Iteration 780: error is 0.62726
Iteration 790: error is 0.62726
Iteration 800: error is 0.62726
Iteration 810: error is 0.62726
Iteration 820: error is 0.62726
Iteration 830: error is 0.62726
Iteration 840: error is 0.62726
Iteration 850: error is 0.62726
Iteration 860: error is 0.62726
Iteration 870: error is 0.62726
Iteration 880: error is 0.62726
Iteration 890: error is 0.62725
Iteration 900: error is 0.62725

```
Iteration 910: error is 0.62725
Iteration 920: error is 0.62725
Iteration 930: error is 0.62725
Iteration 940: error is 0.62725
Iteration 950: error is 0.62725
Iteration 960: error is 0.62725
Iteration 970: error is 0.62725
Iteration 980: error is 0.62725
Iteration 990: error is 0.62725
Iteration 1000: error is 0.62725
J_new = 0.8360
J_new = 0.8194
J_new = 0.8174
J_new = 0.8165
J_new = 0.8139
J_new = 0.8120
J_new = 0.8081
J_new = 0.8065
J_new = 0.8025
J_new = 0.7909
J_new = 0.7814
J_new = 0.7431
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.3271
Iteration 20: error is 37.0681
Iteration 30: error is 36.4359
Iteration 40: error is 36.3767
Iteration 50: error is 37.4086
Iteration 60: error is 37.2031
Iteration 70: error is 37.0717
Iteration 80: error is 36.9958
Iteration 90: error is 37.6965
Iteration 100: error is 2.3549
Iteration 110: error is 1.1988
Iteration 120: error is 0.81461
Iteration 130: error is 0.70402
Iteration 140: error is 0.68491
Iteration 150: error is 0.67375
Iteration 160: error is 0.66477
Iteration 170: error is 0.65943
Iteration 180: error is 0.65585
Iteration 190: error is 0.6532
Iteration 200: error is 0.65099
Iteration 210: error is 0.64924
Iteration 220: error is 0.64787
Iteration 230: error is 0.64667
Iteration 240: error is 0.64567
Iteration 250: error is 0.64479
Iteration 260: error is 0.64344
Iteration 270: error is 0.64196
Iteration 280: error is 0.64086
Iteration 290: error is 0.6401
Iteration 300: error is 0.63953
Iteration 310: error is 0.63909
Iteration 320: error is 0.63872
Iteration 330: error is 0.63843
Iteration 340: error is 0.6382
Iteration 350: error is 0.63801
Iteration 360: error is 0.63786
Iteration 370: error is 0.63771
Iteration 380: error is 0.6376
```

```
Iteration 390: error is 0.6375
Iteration 400: error is 0.63742
Iteration 410: error is 0.63735
Iteration 420: error is 0.63728
Iteration 430: error is 0.63723
Iteration 440: error is 0.63719
Iteration 450: error is 0.63714
Iteration 460: error is 0.63711
Iteration 470: error is 0.63708
Iteration 480: error is 0.63705
Iteration 490: error is 0.63702
Iteration 500: error is 0.637
Iteration 510: error is 0.63698
Iteration 520: error is 0.63697
Iteration 530: error is 0.63695
Iteration 540: error is 0.63694
Iteration 550: error is 0.63692
Iteration 560: error is 0.63691
Iteration 570: error is 0.6369
Iteration 580: error is 0.63689
Iteration 590: error is 0.63689
Iteration 600: error is 0.63688
Iteration 610: error is 0.63687
Iteration 620: error is 0.63687
Iteration 630: error is 0.63686
Iteration 640: error is 0.63686
Iteration 650: error is 0.63685
Iteration 660: error is 0.63685
Iteration 670: error is 0.63684
Iteration 680: error is 0.63684
Iteration 690: error is 0.63684
Iteration 700: error is 0.63684
Iteration 710: error is 0.63683
Iteration 720: error is 0.63683
Iteration 730: error is 0.63683
Iteration 740: error is 0.63683
Iteration 750: error is 0.63682
Iteration 760: error is 0.63682
Iteration 770: error is 0.63682
Iteration 780: error is 0.63682
Iteration 790: error is 0.63682
Iteration 800: error is 0.63682
Iteration 810: error is 0.63682
Iteration 820: error is 0.63682
Iteration 830: error is 0.63682
Iteration 840: error is 0.63681
Iteration 850: error is 0.63681
Iteration 860: error is 0.63681
Iteration 870: error is 0.63681
Iteration 880: error is 0.63681
Iteration 890: error is 0.63681
Iteration 900: error is 0.63681
Iteration 910: error is 0.63681
Iteration 920: error is 0.63681
Iteration 930: error is 0.63681
Iteration 940: error is 0.63681
Iteration 950: error is 0.63681
Iteration 960: error is 0.63681
Iteration 970: error is 0.63681
Iteration 980: error is 0.63681
Iteration 990: error is 0.63681
Iteration 1000: error is 0.63681
J_new = 0.8752
J_new = 0.8381
J_new = 0.8273
```

```
J_new = 0.8268
J_new = 0.8279
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4562
Iteration 20: error is 37.257
Iteration 30: error is 36.9307
Iteration 40: error is 37.3811
Iteration 50: error is 37.4627
Iteration 60: error is 37.1384
Iteration 70: error is 37.2029
Iteration 80: error is 37.0834
Iteration 90: error is 36.9171
Iteration 100: error is 2.1918
Iteration 110: error is 1.1007
Iteration 120: error is 0.82036
Iteration 130: error is 0.70439
Iteration 140: error is 0.67867
Iteration 150: error is 0.6616
Iteration 160: error is 0.65433
Iteration 170: error is 0.64907
Iteration 180: error is 0.64508
Iteration 190: error is 0.6422
Iteration 200: error is 0.63972
Iteration 210: error is 0.63781
Iteration 220: error is 0.63622
Iteration 230: error is 0.63486
Iteration 240: error is 0.63387
Iteration 250: error is 0.63273
Iteration 260: error is 0.63118
Iteration 270: error is 0.62948
Iteration 280: error is 0.62824
Iteration 290: error is 0.6274
Iteration 300: error is 0.62673
Iteration 310: error is 0.6262
Iteration 320: error is 0.6258
Iteration 330: error is 0.62547
Iteration 340: error is 0.62521
Iteration 350: error is 0.62499
Iteration 360: error is 0.62481
Iteration 370: error is 0.62466
Iteration 380: error is 0.62453
Iteration 390: error is 0.62442
Iteration 400: error is 0.62433
Iteration 410: error is 0.62425
Iteration 420: error is 0.62419
Iteration 430: error is 0.62413
Iteration 440: error is 0.62408
Iteration 450: error is 0.62404
Iteration 460: error is 0.624
Iteration 470: error is 0.62396
Iteration 480: error is 0.62393
Iteration 490: error is 0.62391
Iteration 500: error is 0.62389
Iteration 510: error is 0.62387
Iteration 520: error is 0.62385
Iteration 530: error is 0.62383
Iteration 540: error is 0.62382
Iteration 550: error is 0.62381
Iteration 560: error is 0.6238
Iteration 570: error is 0.62379
Iteration 580: error is 0.62378
Iteration 590: error is 0.62377
Iteration 600: error is 0.62376
```

```
Iteration 610: error is 0.62376
Iteration 620: error is 0.62375
Iteration 630: error is 0.62375
Iteration 640: error is 0.62374
Iteration 650: error is 0.62374
Iteration 660: error is 0.62374
Iteration 670: error is 0.62373
Iteration 680: error is 0.62373
Iteration 690: error is 0.62373
Iteration 700: error is 0.62373
Iteration 710: error is 0.62372
Iteration 720: error is 0.62372
Iteration 730: error is 0.62372
Iteration 740: error is 0.62372
Iteration 750: error is 0.62372
Iteration 760: error is 0.62372
Iteration 770: error is 0.62371
Iteration 780: error is 0.62371
Iteration 790: error is 0.62371
Iteration 800: error is 0.62371
Iteration 810: error is 0.62371
Iteration 820: error is 0.62371
Iteration 830: error is 0.62371
Iteration 840: error is 0.62371
Iteration 850: error is 0.62371
Iteration 860: error is 0.62371
Iteration 870: error is 0.62371
Iteration 880: error is 0.62371
Iteration 890: error is 0.62371
Iteration 900: error is 0.62371
Iteration 910: error is 0.62371
Iteration 920: error is 0.62371
Iteration 930: error is 0.62371
Iteration 940: error is 0.62371
Iteration 950: error is 0.62371
Iteration 960: error is 0.62371
Iteration 970: error is 0.6237
Iteration 980: error is 0.6237
Iteration 990: error is 0.6237
Iteration 1000: error is 0.6237
J_new = 0.8426
J_new = 0.8271
J_new = 0.8147
J_new = 0.8115
J_new = 0.8101
J_new = 0.8057
J_new = 0.8010
J_new = 0.7854
J_new = 0.7435
J_new = 0.7419
J_new = 0.7428
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8959
Iteration 20: error is 37.1785
Iteration 30: error is 36.4312
Iteration 40: error is 36.8622
Iteration 50: error is 37.1242
Iteration 60: error is 37.0877
Iteration 70: error is 37.1212
Iteration 80: error is 37.1017
Iteration 90: error is 37.264
Iteration 100: error is 2.191
Iteration 110: error is 1.311
```

Iteration 120: error is 0.91357
Iteration 130: error is 0.70508
Iteration 140: error is 0.67675
Iteration 150: error is 0.66754
Iteration 160: error is 0.6617
Iteration 170: error is 0.65761
Iteration 180: error is 0.65413
Iteration 190: error is 0.65151
Iteration 200: error is 0.64947
Iteration 210: error is 0.64775
Iteration 220: error is 0.64636
Iteration 230: error is 0.64519
Iteration 240: error is 0.64419
Iteration 250: error is 0.64336
Iteration 260: error is 0.64197
Iteration 270: error is 0.6405
Iteration 280: error is 0.63945
Iteration 290: error is 0.63866
Iteration 300: error is 0.63808
Iteration 310: error is 0.63763
Iteration 320: error is 0.63728
Iteration 330: error is 0.637
Iteration 340: error is 0.63677
Iteration 350: error is 0.63659
Iteration 360: error is 0.63644
Iteration 370: error is 0.63631
Iteration 380: error is 0.63621
Iteration 390: error is 0.63612
Iteration 400: error is 0.63605
Iteration 410: error is 0.63598
Iteration 420: error is 0.63593
Iteration 430: error is 0.63588
Iteration 440: error is 0.63584
Iteration 450: error is 0.6358
Iteration 460: error is 0.63577
Iteration 470: error is 0.63574
Iteration 480: error is 0.63535
Iteration 490: error is 0.63467
Iteration 500: error is 0.63452
Iteration 510: error is 0.63448
Iteration 520: error is 0.63444
Iteration 530: error is 0.63442
Iteration 540: error is 0.63441
Iteration 550: error is 0.63439
Iteration 560: error is 0.63438
Iteration 570: error is 0.63437
Iteration 580: error is 0.63435
Iteration 590: error is 0.63435
Iteration 600: error is 0.63434
Iteration 610: error is 0.63433
Iteration 620: error is 0.63432
Iteration 630: error is 0.63432
Iteration 640: error is 0.63431
Iteration 650: error is 0.6343
Iteration 660: error is 0.6343
Iteration 670: error is 0.6343
Iteration 680: error is 0.63429
Iteration 690: error is 0.63429
Iteration 700: error is 0.63429
Iteration 710: error is 0.63428
Iteration 720: error is 0.63428
Iteration 730: error is 0.63428
Iteration 740: error is 0.63428
Iteration 750: error is 0.63428
Iteration 760: error is 0.63427

```
Iteration 770: error is 0.63427
Iteration 780: error is 0.63427
Iteration 790: error is 0.63427
Iteration 800: error is 0.63427
Iteration 810: error is 0.63427
Iteration 820: error is 0.63427
Iteration 830: error is 0.63427
Iteration 840: error is 0.63427
Iteration 850: error is 0.63427
Iteration 860: error is 0.63426
Iteration 870: error is 0.63426
Iteration 880: error is 0.63426
Iteration 890: error is 0.63426
Iteration 900: error is 0.63426
Iteration 910: error is 0.63426
Iteration 920: error is 0.63426
Iteration 930: error is 0.63426
Iteration 940: error is 0.63426
Iteration 950: error is 0.63426
Iteration 960: error is 0.63426
Iteration 970: error is 0.63426
Iteration 980: error is 0.63426
Iteration 990: error is 0.63426
Iteration 1000: error is 0.63426
J_new = 0.8625
J_new = 0.8407
J_new = 0.8310
J_new = 0.8230
J_new = 0.8225
J_new = 0.8234
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.8669
Iteration 20: error is 36.5568
Iteration 30: error is 36.6187
Iteration 40: error is 36.7698
Iteration 50: error is 36.55
Iteration 60: error is 37.4596
Iteration 70: error is 37.2178
Iteration 80: error is 37.5523
Iteration 90: error is 38.4411
Iteration 100: error is 2.3331
Iteration 110: error is 1.5341
Iteration 120: error is 1.0803
Iteration 130: error is 0.92858
Iteration 140: error is 0.83151
Iteration 150: error is 0.70181
Iteration 160: error is 0.69994
Iteration 170: error is 0.65356
Iteration 180: error is 0.647
Iteration 190: error is 0.64436
Iteration 200: error is 0.64235
Iteration 210: error is 0.64075
Iteration 220: error is 0.63945
Iteration 230: error is 0.63834
Iteration 240: error is 0.63738
Iteration 250: error is 0.63656
Iteration 260: error is 0.6352
Iteration 270: error is 0.63372
Iteration 280: error is 0.63266
Iteration 290: error is 0.63191
Iteration 300: error is 0.63132
Iteration 310: error is 0.63081
Iteration 320: error is 0.63043
```

Iteration 330: error is 0.63014
Iteration 340: error is 0.62988
Iteration 350: error is 0.62966
Iteration 360: error is 0.62949
Iteration 370: error is 0.62934
Iteration 380: error is 0.62921
Iteration 390: error is 0.6291
Iteration 400: error is 0.62902
Iteration 410: error is 0.62893
Iteration 420: error is 0.62887
Iteration 430: error is 0.62881
Iteration 440: error is 0.62876
Iteration 450: error is 0.62871
Iteration 460: error is 0.62867
Iteration 470: error is 0.62864
Iteration 480: error is 0.62861
Iteration 490: error is 0.62858
Iteration 500: error is 0.62856
Iteration 510: error is 0.62853
Iteration 520: error is 0.62852
Iteration 530: error is 0.6285
Iteration 540: error is 0.62848
Iteration 550: error is 0.62847
Iteration 560: error is 0.62846
Iteration 570: error is 0.62845
Iteration 580: error is 0.62844
Iteration 590: error is 0.62843
Iteration 600: error is 0.62842
Iteration 610: error is 0.62841
Iteration 620: error is 0.62841
Iteration 630: error is 0.6284
Iteration 640: error is 0.6284
Iteration 650: error is 0.62839
Iteration 660: error is 0.62839
Iteration 670: error is 0.62839
Iteration 680: error is 0.62838
Iteration 690: error is 0.62838
Iteration 700: error is 0.62838
Iteration 710: error is 0.62837
Iteration 720: error is 0.62837
Iteration 730: error is 0.62837
Iteration 740: error is 0.62837
Iteration 750: error is 0.62837
Iteration 760: error is 0.62837
Iteration 770: error is 0.62836
Iteration 780: error is 0.62836
Iteration 790: error is 0.62836
Iteration 800: error is 0.62836
Iteration 810: error is 0.62836
Iteration 820: error is 0.62836
Iteration 830: error is 0.62836
Iteration 840: error is 0.62836
Iteration 850: error is 0.62836
Iteration 860: error is 0.62836
Iteration 870: error is 0.62836
Iteration 880: error is 0.62835
Iteration 890: error is 0.62835
Iteration 900: error is 0.62835
Iteration 910: error is 0.62835
Iteration 920: error is 0.62835
Iteration 930: error is 0.62835
Iteration 940: error is 0.62835
Iteration 950: error is 0.62835
Iteration 960: error is 0.62835
Iteration 970: error is 0.62835

```
Iteration 980: error is 0.62835
Iteration 990: error is 0.62835
Iteration 1000: error is 0.62835
J_new = 0.8429
J_new = 0.8270
J_new = 0.8166
J_new = 0.8150
J_new = 0.8145
J_new = 0.8108
J_new = 0.8088
J_new = 0.8052
J_new = 0.8032
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.852
Iteration 20: error is 37.0946
Iteration 30: error is 36.8681
Iteration 40: error is 37.3364
Iteration 50: error is 37.3042
Iteration 60: error is 37.39
Iteration 70: error is 37.2805
Iteration 80: error is 37.8639
Iteration 90: error is 37.166
Iteration 100: error is 2.1046
Iteration 110: error is 1.2536
Iteration 120: error is 0.90685
Iteration 130: error is 0.73034
Iteration 140: error is 0.69697
Iteration 150: error is 0.67291
Iteration 160: error is 0.66724
Iteration 170: error is 0.66296
Iteration 180: error is 0.6599
Iteration 190: error is 0.65727
Iteration 200: error is 0.65514
Iteration 210: error is 0.65346
Iteration 220: error is 0.65205
Iteration 230: error is 0.65085
Iteration 240: error is 0.64984
Iteration 250: error is 0.64897
Iteration 260: error is 0.6476
Iteration 270: error is 0.64612
Iteration 280: error is 0.64506
Iteration 290: error is 0.6443
Iteration 300: error is 0.6437
Iteration 310: error is 0.64325
Iteration 320: error is 0.64289
Iteration 330: error is 0.64259
Iteration 340: error is 0.64235
Iteration 350: error is 0.64215
Iteration 360: error is 0.64199
Iteration 370: error is 0.64185
Iteration 380: error is 0.64174
Iteration 390: error is 0.64165
Iteration 400: error is 0.64157
Iteration 410: error is 0.6415
Iteration 420: error is 0.64145
Iteration 430: error is 0.64139
Iteration 440: error is 0.64135
Iteration 450: error is 0.64131
Iteration 460: error is 0.64128
```

```
Iteration 470: error is 0.64125
Iteration 480: error is 0.64123
Iteration 490: error is 0.64121
Iteration 500: error is 0.64118
Iteration 510: error is 0.64117
Iteration 520: error is 0.64115
Iteration 530: error is 0.64114
Iteration 540: error is 0.64113
Iteration 550: error is 0.64112
Iteration 560: error is 0.64111
Iteration 570: error is 0.6411
Iteration 580: error is 0.64109
Iteration 590: error is 0.64108
Iteration 600: error is 0.64108
Iteration 610: error is 0.64107
Iteration 620: error is 0.64107
Iteration 630: error is 0.64106
Iteration 640: error is 0.64106
Iteration 650: error is 0.64106
Iteration 660: error is 0.64105
Iteration 670: error is 0.64105
Iteration 680: error is 0.64105
Iteration 690: error is 0.64104
Iteration 700: error is 0.64104
Iteration 710: error is 0.64104
Iteration 720: error is 0.64104
Iteration 730: error is 0.64104
Iteration 740: error is 0.64104
Iteration 750: error is 0.64103
Iteration 760: error is 0.64103
Iteration 770: error is 0.64103
Iteration 780: error is 0.64103
Iteration 790: error is 0.64103
Iteration 800: error is 0.64103
Iteration 810: error is 0.64103
Iteration 820: error is 0.64103
Iteration 830: error is 0.64103
Iteration 840: error is 0.64103
Iteration 850: error is 0.64103
Iteration 860: error is 0.64103
Iteration 870: error is 0.64103
Iteration 880: error is 0.64103
Iteration 890: error is 0.64103
Iteration 900: error is 0.64103
Iteration 910: error is 0.64103
Iteration 920: error is 0.64103
Iteration 930: error is 0.64102
Iteration 940: error is 0.64102
Iteration 950: error is 0.64102
Iteration 960: error is 0.64102
Iteration 970: error is 0.64102
Iteration 980: error is 0.64102
Iteration 990: error is 0.64102
Iteration 1000: error is 0.64102
J_new = 0.8358
J_new = 0.8210
J_new = 0.8180
J_new = 0.8172
J_new = 0.8149
J_new = 0.8144
J_new = 0.8107
J_new = 0.8088
J_new = 0.8052
J_new = 0.8032
J_new = 0.7896
```

```
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4377
Iteration 20: error is 37.1889
Iteration 30: error is 36.9126
Iteration 40: error is 36.7043
Iteration 50: error is 36.9709
Iteration 60: error is 37.3659
Iteration 70: error is 37.5414
Iteration 80: error is 37.4565
Iteration 90: error is 38.7319
Iteration 100: error is 2.3626
Iteration 110: error is 1.3765
Iteration 120: error is 0.99179
Iteration 130: error is 0.80304
Iteration 140: error is 0.69748
Iteration 150: error is 0.68763
Iteration 160: error is 0.68138
Iteration 170: error is 0.67672
Iteration 180: error is 0.67328
Iteration 190: error is 0.67071
Iteration 200: error is 0.66855
Iteration 210: error is 0.66684
Iteration 220: error is 0.66545
Iteration 230: error is 0.66425
Iteration 240: error is 0.66323
Iteration 250: error is 0.66236
Iteration 260: error is 0.66101
Iteration 270: error is 0.65958
Iteration 280: error is 0.65851
Iteration 290: error is 0.65771
Iteration 300: error is 0.65713
Iteration 310: error is 0.65668
Iteration 320: error is 0.65634
Iteration 330: error is 0.65607
Iteration 340: error is 0.65585
Iteration 350: error is 0.65566
Iteration 360: error is 0.65552
Iteration 370: error is 0.6554
Iteration 380: error is 0.65529
Iteration 390: error is 0.6552
Iteration 400: error is 0.65513
Iteration 410: error is 0.65506
Iteration 420: error is 0.65501
Iteration 430: error is 0.65496
Iteration 440: error is 0.65492
Iteration 450: error is 0.65489
Iteration 460: error is 0.65486
Iteration 470: error is 0.65483
Iteration 480: error is 0.65481
Iteration 490: error is 0.65479
Iteration 500: error is 0.65478
Iteration 510: error is 0.65476
Iteration 520: error is 0.65475
Iteration 530: error is 0.65474
Iteration 540: error is 0.65473
Iteration 550: error is 0.65472
Iteration 560: error is 0.65471
Iteration 570: error is 0.6547
Iteration 580: error is 0.6547
Iteration 590: error is 0.65469
```

```
Iteration 600: error is 0.65469
Iteration 610: error is 0.65468
Iteration 620: error is 0.65468
Iteration 630: error is 0.65468
Iteration 640: error is 0.65467
Iteration 650: error is 0.65467
Iteration 660: error is 0.65467
Iteration 670: error is 0.65467
Iteration 680: error is 0.65466
Iteration 690: error is 0.65466
Iteration 700: error is 0.65466
Iteration 710: error is 0.65466
Iteration 720: error is 0.65466
Iteration 730: error is 0.65466
Iteration 740: error is 0.65466
Iteration 750: error is 0.65466
Iteration 760: error is 0.65465
Iteration 770: error is 0.65465
Iteration 780: error is 0.65465
Iteration 790: error is 0.65465
Iteration 800: error is 0.65465
Iteration 810: error is 0.65465
Iteration 820: error is 0.65465
Iteration 830: error is 0.65465
Iteration 840: error is 0.65465
Iteration 850: error is 0.65465
Iteration 860: error is 0.65465
Iteration 870: error is 0.65465
Iteration 880: error is 0.65465
Iteration 890: error is 0.65465
Iteration 900: error is 0.65465
Iteration 910: error is 0.65465
Iteration 920: error is 0.65465
Iteration 930: error is 0.65465
Iteration 940: error is 0.65465
Iteration 950: error is 0.65465
Iteration 960: error is 0.65465
Iteration 970: error is 0.65465
Iteration 980: error is 0.65465
Iteration 990: error is 0.65465
Iteration 1000: error is 0.65465
J_new = 0.8398
J_new = 0.8265
J_new = 0.8145
J_new = 0.8112
J_new = 0.8098
J_new = 0.8054
J_new = 0.8006
J_new = 0.7851
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6297
Iteration 20: error is 37.2906
Iteration 30: error is 37.1515
Iteration 40: error is 37.5902
Iteration 50: error is 37.419
Iteration 60: error is 37.629
Iteration 70: error is 37.7646
Iteration 80: error is 38.0333
Iteration 90: error is 37.7176
Iteration 100: error is 2.1942
```

Iteration 110: error is 1.2346
Iteration 120: error is 0.89554
Iteration 130: error is 0.78545
Iteration 140: error is 0.69594
Iteration 150: error is 0.67899
Iteration 160: error is 0.66333
Iteration 170: error is 0.65902
Iteration 180: error is 0.65555
Iteration 190: error is 0.65294
Iteration 200: error is 0.65064
Iteration 210: error is 0.64889
Iteration 220: error is 0.64738
Iteration 230: error is 0.64612
Iteration 240: error is 0.64509
Iteration 250: error is 0.64416
Iteration 260: error is 0.64276
Iteration 270: error is 0.64122
Iteration 280: error is 0.64014
Iteration 290: error is 0.63933
Iteration 300: error is 0.6387
Iteration 310: error is 0.63823
Iteration 320: error is 0.63785
Iteration 330: error is 0.63755
Iteration 340: error is 0.63732
Iteration 350: error is 0.63713
Iteration 360: error is 0.63697
Iteration 370: error is 0.63681
Iteration 380: error is 0.6367
Iteration 390: error is 0.6366
Iteration 400: error is 0.63652
Iteration 410: error is 0.63645
Iteration 420: error is 0.6364
Iteration 430: error is 0.63634
Iteration 440: error is 0.6363
Iteration 450: error is 0.63626
Iteration 460: error is 0.63623
Iteration 470: error is 0.6362
Iteration 480: error is 0.63617
Iteration 490: error is 0.63615
Iteration 500: error is 0.63613
Iteration 510: error is 0.63611
Iteration 520: error is 0.6361
Iteration 530: error is 0.63609
Iteration 540: error is 0.63607
Iteration 550: error is 0.63606
Iteration 560: error is 0.63606
Iteration 570: error is 0.63605
Iteration 580: error is 0.63604
Iteration 590: error is 0.63603
Iteration 600: error is 0.63603
Iteration 610: error is 0.63602
Iteration 620: error is 0.63602
Iteration 630: error is 0.63601
Iteration 640: error is 0.63601
Iteration 650: error is 0.63601
Iteration 660: error is 0.63601
Iteration 670: error is 0.636
Iteration 680: error is 0.636
Iteration 690: error is 0.636
Iteration 700: error is 0.636
Iteration 710: error is 0.636
Iteration 720: error is 0.63599
Iteration 730: error is 0.63599
Iteration 740: error is 0.63599
Iteration 750: error is 0.63599

```
Iteration 760: error is 0.63599
Iteration 770: error is 0.63599
Iteration 780: error is 0.63599
Iteration 790: error is 0.63599
Iteration 800: error is 0.63599
Iteration 810: error is 0.63599
Iteration 820: error is 0.63599
Iteration 830: error is 0.63599
Iteration 840: error is 0.63598
Iteration 850: error is 0.63598
Iteration 860: error is 0.63598
Iteration 870: error is 0.63598
Iteration 880: error is 0.63598
Iteration 890: error is 0.63598
Iteration 900: error is 0.63598
Iteration 910: error is 0.63598
Iteration 920: error is 0.63598
Iteration 930: error is 0.63598
Iteration 940: error is 0.63598
Iteration 950: error is 0.63598
Iteration 960: error is 0.63598
Iteration 970: error is 0.63598
Iteration 980: error is 0.63598
Iteration 990: error is 0.63598
Iteration 1000: error is 0.63598
J_new = 0.8438
J_new = 0.8283
J_new = 0.8177
J_new = 0.8162
J_new = 0.8159
J_new = 0.8135
J_new = 0.8116
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6503
Iteration 20: error is 36.6521
Iteration 30: error is 36.8024
Iteration 40: error is 36.6292
Iteration 50: error is 37.2368
Iteration 60: error is 37.0037
Iteration 70: error is 37.3531
Iteration 80: error is 37.2741
Iteration 90: error is 37.723
Iteration 100: error is 2.3018
Iteration 110: error is 1.1418
Iteration 120: error is 0.75508
Iteration 130: error is 0.68918
Iteration 140: error is 0.67504
Iteration 150: error is 0.66499
Iteration 160: error is 0.6586
Iteration 170: error is 0.65383
Iteration 180: error is 0.65022
Iteration 190: error is 0.64748
Iteration 200: error is 0.64536
Iteration 210: error is 0.6435
Iteration 220: error is 0.64209
```

Iteration 230: error is 0.64082
Iteration 240: error is 0.63977
Iteration 250: error is 0.63888
Iteration 260: error is 0.63748
Iteration 270: error is 0.63598
Iteration 280: error is 0.63484
Iteration 290: error is 0.634
Iteration 300: error is 0.63338
Iteration 310: error is 0.6329
Iteration 320: error is 0.63252
Iteration 330: error is 0.63221
Iteration 340: error is 0.63197
Iteration 350: error is 0.63178
Iteration 360: error is 0.63161
Iteration 370: error is 0.63147
Iteration 380: error is 0.63135
Iteration 390: error is 0.63126
Iteration 400: error is 0.63117
Iteration 410: error is 0.6311
Iteration 420: error is 0.63104
Iteration 430: error is 0.63099
Iteration 440: error is 0.63095
Iteration 450: error is 0.63091
Iteration 460: error is 0.63087
Iteration 470: error is 0.63084
Iteration 480: error is 0.63082
Iteration 490: error is 0.6308
Iteration 500: error is 0.63078
Iteration 510: error is 0.63076
Iteration 520: error is 0.63074
Iteration 530: error is 0.63073
Iteration 540: error is 0.63072
Iteration 550: error is 0.63071
Iteration 560: error is 0.6307
Iteration 570: error is 0.63069
Iteration 580: error is 0.63068
Iteration 590: error is 0.63068
Iteration 600: error is 0.63067
Iteration 610: error is 0.63067
Iteration 620: error is 0.63066
Iteration 630: error is 0.63066
Iteration 640: error is 0.63065
Iteration 650: error is 0.63065
Iteration 660: error is 0.63065
Iteration 670: error is 0.63064
Iteration 680: error is 0.63064
Iteration 690: error is 0.63064
Iteration 700: error is 0.63064
Iteration 710: error is 0.63064
Iteration 720: error is 0.63064
Iteration 730: error is 0.63063
Iteration 740: error is 0.63063
Iteration 750: error is 0.63063
Iteration 760: error is 0.63063
Iteration 770: error is 0.63063
Iteration 780: error is 0.63063
Iteration 790: error is 0.63063
Iteration 800: error is 0.63063
Iteration 810: error is 0.63063
Iteration 820: error is 0.63063
Iteration 830: error is 0.63063
Iteration 840: error is 0.63063
Iteration 850: error is 0.63062
Iteration 860: error is 0.63062
Iteration 870: error is 0.63062

```
Iteration 880: error is 0.63062
Iteration 890: error is 0.63062
Iteration 900: error is 0.63062
Iteration 910: error is 0.63062
Iteration 920: error is 0.63062
Iteration 930: error is 0.63062
Iteration 940: error is 0.63062
Iteration 950: error is 0.63062
Iteration 960: error is 0.63062
Iteration 970: error is 0.63062
Iteration 980: error is 0.63062
Iteration 990: error is 0.63062
Iteration 1000: error is 0.63062
J_new = 0.8700
J_new = 0.8374
J_new = 0.8208
J_new = 0.8095
J_new = 0.8059
J_new = 0.8011
J_new = 0.7853
J_new = 0.7431
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4171
Iteration 20: error is 37.4417
Iteration 30: error is 36.8175
Iteration 40: error is 37.2257
Iteration 50: error is 36.8302
Iteration 60: error is 36.85
Iteration 70: error is 37.3092
Iteration 80: error is 37.6333
Iteration 90: error is 37.4798
Iteration 100: error is 2.2302
Iteration 110: error is 1.1695
Iteration 120: error is 0.77874
Iteration 130: error is 0.69816
Iteration 140: error is 0.6774
Iteration 150: error is 0.66643
Iteration 160: error is 0.65958
Iteration 170: error is 0.65561
Iteration 180: error is 0.6512
Iteration 190: error is 0.64838
Iteration 200: error is 0.64612
Iteration 210: error is 0.64438
Iteration 220: error is 0.64289
Iteration 230: error is 0.64169
Iteration 240: error is 0.64069
Iteration 250: error is 0.63979
Iteration 260: error is 0.63838
Iteration 270: error is 0.63691
Iteration 280: error is 0.63582
Iteration 290: error is 0.63501
Iteration 300: error is 0.63443
Iteration 310: error is 0.63397
Iteration 320: error is 0.63363
Iteration 330: error is 0.63334
Iteration 340: error is 0.63311
Iteration 350: error is 0.63291
Iteration 360: error is 0.63275
Iteration 370: error is 0.63261
Iteration 380: error is 0.63249
Iteration 390: error is 0.6324
```

```
Iteration 400: error is 0.63232
Iteration 410: error is 0.63225
Iteration 420: error is 0.63218
Iteration 430: error is 0.63213
Iteration 440: error is 0.63208
Iteration 450: error is 0.63204
Iteration 460: error is 0.632
Iteration 470: error is 0.63197
Iteration 480: error is 0.63194
Iteration 490: error is 0.63192
Iteration 500: error is 0.6319
Iteration 510: error is 0.63187
Iteration 520: error is 0.63185
Iteration 530: error is 0.63184
Iteration 540: error is 0.63182
Iteration 550: error is 0.63181
Iteration 560: error is 0.6318
Iteration 570: error is 0.63179
Iteration 580: error is 0.63178
Iteration 590: error is 0.63177
Iteration 600: error is 0.63176
Iteration 610: error is 0.63175
Iteration 620: error is 0.63175
Iteration 630: error is 0.63174
Iteration 640: error is 0.63173
Iteration 650: error is 0.63173
Iteration 660: error is 0.63172
Iteration 670: error is 0.63172
Iteration 680: error is 0.63172
Iteration 690: error is 0.63171
Iteration 700: error is 0.63171
Iteration 710: error is 0.63171
Iteration 720: error is 0.6317
Iteration 730: error is 0.6317
Iteration 740: error is 0.6317
Iteration 750: error is 0.6317
Iteration 760: error is 0.6317
Iteration 770: error is 0.63169
Iteration 780: error is 0.63169
Iteration 790: error is 0.63169
Iteration 800: error is 0.63169
Iteration 810: error is 0.63169
Iteration 820: error is 0.63169
Iteration 830: error is 0.63169
Iteration 840: error is 0.63169
Iteration 850: error is 0.63168
Iteration 860: error is 0.63168
Iteration 870: error is 0.63168
Iteration 880: error is 0.63168
Iteration 890: error is 0.63168
Iteration 900: error is 0.63168
Iteration 910: error is 0.63168
Iteration 920: error is 0.63168
Iteration 930: error is 0.63168
Iteration 940: error is 0.63168
Iteration 950: error is 0.63168
Iteration 960: error is 0.63168
Iteration 970: error is 0.63168
Iteration 980: error is 0.63168
Iteration 990: error is 0.63168
Iteration 1000: error is 0.63168
J_new = 0.8612
J_new = 0.8302
J_new = 0.8155
J_new = 0.8120
```

```
J_new = 0.8106
J_new = 0.8062
J_new = 0.8014
J_new = 0.7859
J_new = 0.7439
J_new = 0.7424
J_new = 0.7432
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.6591
Iteration 20: error is 37.1042
Iteration 30: error is 36.8292
Iteration 40: error is 36.7095
Iteration 50: error is 36.9915
Iteration 60: error is 37.1214
Iteration 70: error is 37.2059
Iteration 80: error is 37.5006
Iteration 90: error is 37.7942
Iteration 100: error is 2.2346
Iteration 110: error is 1.3241
Iteration 120: error is 1.0333
Iteration 130: error is 0.95582
Iteration 140: error is 0.87167
Iteration 150: error is 0.84857
Iteration 160: error is 0.7975
Iteration 170: error is 0.75992
Iteration 180: error is 0.70338
Iteration 190: error is 0.66006
Iteration 200: error is 0.65734
Iteration 210: error is 0.65405
Iteration 220: error is 0.65265
Iteration 230: error is 0.65145
Iteration 240: error is 0.65048
Iteration 250: error is 0.64965
Iteration 260: error is 0.64832
Iteration 270: error is 0.64691
Iteration 280: error is 0.64583
Iteration 290: error is 0.64504
Iteration 300: error is 0.64444
Iteration 310: error is 0.64396
Iteration 320: error is 0.64358
Iteration 330: error is 0.64328
Iteration 340: error is 0.64303
Iteration 350: error is 0.64283
Iteration 360: error is 0.64266
Iteration 370: error is 0.64252
Iteration 380: error is 0.6424
Iteration 390: error is 0.6423
Iteration 400: error is 0.64221
Iteration 410: error is 0.64214
Iteration 420: error is 0.64208
Iteration 430: error is 0.64202
Iteration 440: error is 0.64198
Iteration 450: error is 0.64193
Iteration 460: error is 0.6419
Iteration 470: error is 0.64187
Iteration 480: error is 0.64184
Iteration 490: error is 0.64181
Iteration 500: error is 0.64179
Iteration 510: error is 0.64177
Iteration 520: error is 0.64176
Iteration 530: error is 0.64174
Iteration 540: error is 0.64173
Iteration 550: error is 0.64172
```

```
Iteration 560: error is 0.64171
Iteration 570: error is 0.6417
Iteration 580: error is 0.64169
Iteration 590: error is 0.64169
Iteration 600: error is 0.64168
Iteration 610: error is 0.64167
Iteration 620: error is 0.64167
Iteration 630: error is 0.64167
Iteration 640: error is 0.64166
Iteration 650: error is 0.64166
Iteration 660: error is 0.64165
Iteration 670: error is 0.64165
Iteration 680: error is 0.64165
Iteration 690: error is 0.64165
Iteration 700: error is 0.64164
Iteration 710: error is 0.64164
Iteration 720: error is 0.64164
Iteration 730: error is 0.64164
Iteration 740: error is 0.64164
Iteration 750: error is 0.64164
Iteration 760: error is 0.64164
Iteration 770: error is 0.64164
Iteration 780: error is 0.64163
Iteration 790: error is 0.64163
Iteration 800: error is 0.64163
Iteration 810: error is 0.64163
Iteration 820: error is 0.64163
Iteration 830: error is 0.64163
Iteration 840: error is 0.64163
Iteration 850: error is 0.64163
Iteration 860: error is 0.64163
Iteration 870: error is 0.64163
Iteration 880: error is 0.64163
Iteration 890: error is 0.64163
Iteration 900: error is 0.64163
Iteration 910: error is 0.64163
Iteration 920: error is 0.64163
Iteration 930: error is 0.64163
Iteration 940: error is 0.64163
Iteration 950: error is 0.64163
Iteration 960: error is 0.64163
Iteration 970: error is 0.64163
Iteration 980: error is 0.64163
Iteration 990: error is 0.64163
Iteration 1000: error is 0.64163
J_new = 0.8433
J_new = 0.8274
J_new = 0.8164
J_new = 0.8143
J_new = 0.8118
J_new = 0.8075
J_new = 0.8059
J_new = 0.8014
J_new = 0.7861
J_new = 0.7421
J_new = 0.7426
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.4171
Iteration 20: error is 36.8787
Iteration 30: error is 37.1461
Iteration 40: error is 36.535
Iteration 50: error is 36.184
Iteration 60: error is 37.7389
```

Iteration 70: error is 37.4823
Iteration 80: error is 37.0722
Iteration 90: error is 37.1735
Iteration 100: error is 2.1321
Iteration 110: error is 1.332
Iteration 120: error is 0.84776
Iteration 130: error is 0.72719
Iteration 140: error is 0.71149
Iteration 150: error is 0.70123
Iteration 160: error is 0.69554
Iteration 170: error is 0.69119
Iteration 180: error is 0.68799
Iteration 190: error is 0.68548
Iteration 200: error is 0.68348
Iteration 210: error is 0.68193
Iteration 220: error is 0.68056
Iteration 230: error is 0.67944
Iteration 240: error is 0.67852
Iteration 250: error is 0.67774
Iteration 260: error is 0.67651
Iteration 270: error is 0.67515
Iteration 280: error is 0.67417
Iteration 290: error is 0.67353
Iteration 300: error is 0.67303
Iteration 310: error is 0.67262
Iteration 320: error is 0.67232
Iteration 330: error is 0.67207
Iteration 340: error is 0.67187
Iteration 350: error is 0.67172
Iteration 360: error is 0.6716
Iteration 370: error is 0.67149
Iteration 380: error is 0.6714
Iteration 390: error is 0.67133
Iteration 400: error is 0.67126
Iteration 410: error is 0.67121
Iteration 420: error is 0.67117
Iteration 430: error is 0.67113
Iteration 440: error is 0.6711
Iteration 450: error is 0.67108
Iteration 460: error is 0.67105
Iteration 470: error is 0.67104
Iteration 480: error is 0.67102
Iteration 490: error is 0.67101
Iteration 500: error is 0.67099
Iteration 510: error is 0.67098
Iteration 520: error is 0.67097
Iteration 530: error is 0.67097
Iteration 540: error is 0.67096
Iteration 550: error is 0.67095
Iteration 560: error is 0.67095
Iteration 570: error is 0.67094
Iteration 580: error is 0.67094
Iteration 590: error is 0.67094
Iteration 600: error is 0.67093
Iteration 610: error is 0.67093
Iteration 620: error is 0.67093
Iteration 630: error is 0.67093
Iteration 640: error is 0.67093
Iteration 650: error is 0.67092
Iteration 660: error is 0.67092
Iteration 670: error is 0.67092
Iteration 680: error is 0.67092
Iteration 690: error is 0.67092
Iteration 700: error is 0.67092
Iteration 710: error is 0.67092

```
Iteration 720: error is 0.67092
Iteration 730: error is 0.67092
Iteration 740: error is 0.67092
Iteration 750: error is 0.67092
Iteration 760: error is 0.67092
Iteration 770: error is 0.67092
Iteration 780: error is 0.67092
Iteration 790: error is 0.67092
Iteration 800: error is 0.67092
Iteration 810: error is 0.67092
Iteration 820: error is 0.67092
Iteration 830: error is 0.67092
Iteration 840: error is 0.67092
Iteration 850: error is 0.67092
Iteration 860: error is 0.67092
Iteration 870: error is 0.67091
Iteration 880: error is 0.67091
Iteration 890: error is 0.67091
Iteration 900: error is 0.67091
Iteration 910: error is 0.67091
Iteration 920: error is 0.67091
Iteration 930: error is 0.67091
Iteration 940: error is 0.67091
Iteration 950: error is 0.67091
Iteration 960: error is 0.67091
Iteration 970: error is 0.67091
Iteration 980: error is 0.67091
Iteration 990: error is 0.67091
Iteration 1000: error is 0.67091
J_new = 0.8365
J_new = 0.8285
J_new = 0.8278
J_new = 0.8255
J_new = 0.8202
J_new = 0.8184
J_new = 0.8177
J_new = 0.8162
J_new = 0.8144
J_new = 0.8133
J_new = 0.8128
J_new = 0.8128
J_new = 0.8126
J_new = 0.8127
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.2249
Iteration 20: error is 37.4246
Iteration 30: error is 36.9642
Iteration 40: error is 37.1386
Iteration 50: error is 37.3022
Iteration 60: error is 37.0743
Iteration 70: error is 36.9794
Iteration 80: error is 37.3192
Iteration 90: error is 37.3301
Iteration 100: error is 2.2479
Iteration 110: error is 1.354
Iteration 120: error is 0.97987
Iteration 130: error is 0.85149
Iteration 140: error is 0.7614
Iteration 150: error is 0.69913
Iteration 160: error is 0.68339
Iteration 170: error is 0.66191
Iteration 180: error is 0.65554
Iteration 190: error is 0.65296
```

Iteration 200: error is 0.65093
Iteration 210: error is 0.64918
Iteration 220: error is 0.64772
Iteration 230: error is 0.64653
Iteration 240: error is 0.6455
Iteration 250: error is 0.64462
Iteration 260: error is 0.64318
Iteration 270: error is 0.64164
Iteration 280: error is 0.64051
Iteration 290: error is 0.63968
Iteration 300: error is 0.63905
Iteration 310: error is 0.63855
Iteration 320: error is 0.63816
Iteration 330: error is 0.63784
Iteration 340: error is 0.63758
Iteration 350: error is 0.63738
Iteration 360: error is 0.6372
Iteration 370: error is 0.63706
Iteration 380: error is 0.63694
Iteration 390: error is 0.63684
Iteration 400: error is 0.63675
Iteration 410: error is 0.63668
Iteration 420: error is 0.63661
Iteration 430: error is 0.63656
Iteration 440: error is 0.63651
Iteration 450: error is 0.63647
Iteration 460: error is 0.63643
Iteration 470: error is 0.6364
Iteration 480: error is 0.63638
Iteration 490: error is 0.63635
Iteration 500: error is 0.63633
Iteration 510: error is 0.63631
Iteration 520: error is 0.63629
Iteration 530: error is 0.63628
Iteration 540: error is 0.63627
Iteration 550: error is 0.63625
Iteration 560: error is 0.63624
Iteration 570: error is 0.63624
Iteration 580: error is 0.63623
Iteration 590: error is 0.63622
Iteration 600: error is 0.63621
Iteration 610: error is 0.63621
Iteration 620: error is 0.6362
Iteration 630: error is 0.6362
Iteration 640: error is 0.63619
Iteration 650: error is 0.63619
Iteration 660: error is 0.63619
Iteration 670: error is 0.63618
Iteration 680: error is 0.63618
Iteration 690: error is 0.63618
Iteration 700: error is 0.63618
Iteration 710: error is 0.63617
Iteration 720: error is 0.63617
Iteration 730: error is 0.63617
Iteration 740: error is 0.63617
Iteration 750: error is 0.63617
Iteration 760: error is 0.63617
Iteration 770: error is 0.63617
Iteration 780: error is 0.63617
Iteration 790: error is 0.63616
Iteration 800: error is 0.63616
Iteration 810: error is 0.63616
Iteration 820: error is 0.63616
Iteration 830: error is 0.63616
Iteration 840: error is 0.63616

```
Iteration 850: error is 0.63616
Iteration 860: error is 0.63616
Iteration 870: error is 0.63616
Iteration 880: error is 0.63616
Iteration 890: error is 0.63616
Iteration 900: error is 0.63616
Iteration 910: error is 0.63616
Iteration 920: error is 0.63616
Iteration 930: error is 0.63616
Iteration 940: error is 0.63616
Iteration 950: error is 0.63616
Iteration 960: error is 0.63616
Iteration 970: error is 0.63616
Iteration 980: error is 0.63616
Iteration 990: error is 0.63616
Iteration 1000: error is 0.63616
J_new = 0.8521
J_new = 0.8277
J_new = 0.8172
J_new = 0.8152
J_new = 0.8148
J_new = 0.8110
J_new = 0.8092
J_new = 0.8054
J_new = 0.8036
J_new = 0.7898
J_new = 0.7825
J_new = 0.7420
J_new = 0.7429
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.7468
Iteration 20: error is 36.8331
Iteration 30: error is 36.8245
Iteration 40: error is 36.1705
Iteration 50: error is 36.5223
Iteration 60: error is 37.0641
Iteration 70: error is 37.5226
Iteration 80: error is 37.6583
Iteration 90: error is 37.6131
Iteration 100: error is 2.3328
Iteration 110: error is 1.3803
Iteration 120: error is 0.95813
Iteration 130: error is 0.83919
Iteration 140: error is 0.81479
Iteration 150: error is 0.78794
Iteration 160: error is 0.6823
Iteration 170: error is 0.68505
Iteration 180: error is 0.66006
Iteration 190: error is 0.65615
Iteration 200: error is 0.65433
Iteration 210: error is 0.65285
Iteration 220: error is 0.65138
Iteration 230: error is 0.65033
Iteration 240: error is 0.64949
Iteration 250: error is 0.64867
Iteration 260: error is 0.64748
Iteration 270: error is 0.64614
Iteration 280: error is 0.64516
Iteration 290: error is 0.64444
Iteration 300: error is 0.64388
Iteration 310: error is 0.64345
Iteration 320: error is 0.64311
Iteration 330: error is 0.64283
```

Iteration 340: error is 0.6426
Iteration 350: error is 0.64242
Iteration 360: error is 0.64227
Iteration 370: error is 0.64213
Iteration 380: error is 0.64203
Iteration 390: error is 0.64194
Iteration 400: error is 0.64186
Iteration 410: error is 0.64179
Iteration 420: error is 0.64173
Iteration 430: error is 0.64168
Iteration 440: error is 0.64163
Iteration 450: error is 0.64159
Iteration 460: error is 0.64155
Iteration 470: error is 0.64152
Iteration 480: error is 0.6415
Iteration 490: error is 0.64147
Iteration 500: error is 0.64145
Iteration 510: error is 0.64143
Iteration 520: error is 0.64141
Iteration 530: error is 0.6414
Iteration 540: error is 0.64138
Iteration 550: error is 0.64137
Iteration 560: error is 0.64136
Iteration 570: error is 0.64135
Iteration 580: error is 0.64134
Iteration 590: error is 0.64133
Iteration 600: error is 0.64132
Iteration 610: error is 0.64131
Iteration 620: error is 0.64131
Iteration 630: error is 0.6413
Iteration 640: error is 0.6413
Iteration 650: error is 0.64129
Iteration 660: error is 0.64129
Iteration 670: error is 0.64128
Iteration 680: error is 0.64128
Iteration 690: error is 0.64128
Iteration 700: error is 0.64127
Iteration 710: error is 0.64127
Iteration 720: error is 0.64127
Iteration 730: error is 0.64127
Iteration 740: error is 0.64126
Iteration 750: error is 0.64126
Iteration 760: error is 0.64126
Iteration 770: error is 0.64126
Iteration 780: error is 0.64126
Iteration 790: error is 0.64126
Iteration 800: error is 0.64126
Iteration 810: error is 0.64125
Iteration 820: error is 0.64125
Iteration 830: error is 0.64125
Iteration 840: error is 0.64125
Iteration 850: error is 0.64125
Iteration 860: error is 0.64125
Iteration 870: error is 0.64125
Iteration 880: error is 0.64125
Iteration 890: error is 0.64125
Iteration 900: error is 0.64125
Iteration 910: error is 0.64125
Iteration 920: error is 0.64125
Iteration 930: error is 0.64125
Iteration 940: error is 0.64124
Iteration 950: error is 0.64124
Iteration 960: error is 0.64124
Iteration 970: error is 0.64124
Iteration 980: error is 0.64124

```
Iteration 990: error is 0.64124
Iteration 1000: error is 0.64124
J_new = 0.8343
J_new = 0.8193
J_new = 0.8173
J_new = 0.8169
J_new = 0.8148
J_new = 0.8142
J_new = 0.8107
J_new = 0.8088
J_new = 0.8052
J_new = 0.8031
J_new = 0.7896
J_new = 0.7820
J_new = 0.7418
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.6643
Iteration 20: error is 37.566
Iteration 30: error is 37.1751
Iteration 40: error is 37.2269
Iteration 50: error is 36.825
Iteration 60: error is 37.545
Iteration 70: error is 37.6106
Iteration 80: error is 37.3548
Iteration 90: error is 38.0102
Iteration 100: error is 2.2847
Iteration 110: error is 1.2909
Iteration 120: error is 0.90305
Iteration 130: error is 0.80821
Iteration 140: error is 0.74403
Iteration 150: error is 0.70156
Iteration 160: error is 0.69533
Iteration 170: error is 0.69003
Iteration 180: error is 0.68682
Iteration 190: error is 0.67397
Iteration 200: error is 0.66848
Iteration 210: error is 0.66674
Iteration 220: error is 0.66507
Iteration 230: error is 0.65848
Iteration 240: error is 0.65162
Iteration 250: error is 0.65063
Iteration 260: error is 0.64916
Iteration 270: error is 0.64764
Iteration 280: error is 0.6465
Iteration 290: error is 0.64556
Iteration 300: error is 0.64495
Iteration 310: error is 0.64447
Iteration 320: error is 0.64408
Iteration 330: error is 0.64317
Iteration 340: error is 0.64285
Iteration 350: error is 0.64264
Iteration 360: error is 0.64248
Iteration 370: error is 0.64234
Iteration 380: error is 0.64221
Iteration 390: error is 0.64211
Iteration 400: error is 0.64202
Iteration 410: error is 0.64194
Iteration 420: error is 0.64188
Iteration 430: error is 0.64182
Iteration 440: error is 0.64177
Iteration 450: error is 0.64173
Iteration 460: error is 0.64169
```

```
Iteration 470: error is 0.64166
Iteration 480: error is 0.64164
Iteration 490: error is 0.64161
Iteration 500: error is 0.64159
Iteration 510: error is 0.64157
Iteration 520: error is 0.64156
Iteration 530: error is 0.64154
Iteration 540: error is 0.64153
Iteration 550: error is 0.64152
Iteration 560: error is 0.64151
Iteration 570: error is 0.6415
Iteration 580: error is 0.64149
Iteration 590: error is 0.64148
Iteration 600: error is 0.64148
Iteration 610: error is 0.64147
Iteration 620: error is 0.64147
Iteration 630: error is 0.64146
Iteration 640: error is 0.64146
Iteration 650: error is 0.64145
Iteration 660: error is 0.64145
Iteration 670: error is 0.64145
Iteration 680: error is 0.64145
Iteration 690: error is 0.64144
Iteration 700: error is 0.64144
Iteration 710: error is 0.64144
Iteration 720: error is 0.64144
Iteration 730: error is 0.64144
Iteration 740: error is 0.64144
Iteration 750: error is 0.64143
Iteration 760: error is 0.64143
Iteration 770: error is 0.64143
Iteration 780: error is 0.64143
Iteration 790: error is 0.64143
Iteration 800: error is 0.64143
Iteration 810: error is 0.64143
Iteration 820: error is 0.64143
Iteration 830: error is 0.64143
Iteration 840: error is 0.64143
Iteration 850: error is 0.64143
Iteration 860: error is 0.64143
Iteration 870: error is 0.64143
Iteration 880: error is 0.64143
Iteration 890: error is 0.64143
Iteration 900: error is 0.64143
Iteration 910: error is 0.64143
Iteration 920: error is 0.64143
Iteration 930: error is 0.64142
Iteration 940: error is 0.64142
Iteration 950: error is 0.64142
Iteration 960: error is 0.64142
Iteration 970: error is 0.64142
Iteration 980: error is 0.64142
Iteration 990: error is 0.64142
Iteration 1000: error is 0.64142
J_new = 0.7926
J_new = 0.7669
J_new = 0.7505
J_new = 0.7395
J_new = 0.7386
J_new = 0.7396
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.8524
Iteration 20: error is 37.203
```

Iteration 30: error is 37.1345
Iteration 40: error is 37.2295
Iteration 50: error is 36.9972
Iteration 60: error is 37.2935
Iteration 70: error is 37.1445
Iteration 80: error is 37.4572
Iteration 90: error is 37.6041
Iteration 100: error is 2.2977
Iteration 110: error is 1.3045
Iteration 120: error is 0.89075
Iteration 130: error is 0.79401
Iteration 140: error is 0.71088
Iteration 150: error is 0.68502
Iteration 160: error is 0.67837
Iteration 170: error is 0.66206
Iteration 180: error is 0.6581
Iteration 190: error is 0.6554
Iteration 200: error is 0.65297
Iteration 210: error is 0.65123
Iteration 220: error is 0.6498
Iteration 230: error is 0.64843
Iteration 240: error is 0.6474
Iteration 250: error is 0.64651
Iteration 260: error is 0.64511
Iteration 270: error is 0.64365
Iteration 280: error is 0.6426
Iteration 290: error is 0.64181
Iteration 300: error is 0.64122
Iteration 310: error is 0.64077
Iteration 320: error is 0.64042
Iteration 330: error is 0.64015
Iteration 340: error is 0.63992
Iteration 350: error is 0.63974
Iteration 360: error is 0.63959
Iteration 370: error is 0.63947
Iteration 380: error is 0.63937
Iteration 390: error is 0.63929
Iteration 400: error is 0.63921
Iteration 410: error is 0.63915
Iteration 420: error is 0.6391
Iteration 430: error is 0.63905
Iteration 440: error is 0.63902
Iteration 450: error is 0.63898
Iteration 460: error is 0.63896
Iteration 470: error is 0.63893
Iteration 480: error is 0.63891
Iteration 490: error is 0.63889
Iteration 500: error is 0.63888
Iteration 510: error is 0.63887
Iteration 520: error is 0.63885
Iteration 530: error is 0.63884
Iteration 540: error is 0.63883
Iteration 550: error is 0.63883
Iteration 560: error is 0.63882
Iteration 570: error is 0.63881
Iteration 580: error is 0.63881
Iteration 590: error is 0.6388
Iteration 600: error is 0.6388
Iteration 610: error is 0.6388
Iteration 620: error is 0.63879
Iteration 630: error is 0.63879
Iteration 640: error is 0.63879
Iteration 650: error is 0.63879
Iteration 660: error is 0.63878
Iteration 670: error is 0.63878

```
Iteration 680: error is 0.63878
Iteration 690: error is 0.63878
Iteration 700: error is 0.63878
Iteration 710: error is 0.63878
Iteration 720: error is 0.63878
Iteration 730: error is 0.63877
Iteration 740: error is 0.63877
Iteration 750: error is 0.63877
Iteration 760: error is 0.63877
Iteration 770: error is 0.63877
Iteration 780: error is 0.63877
Iteration 790: error is 0.63877
Iteration 800: error is 0.63877
Iteration 810: error is 0.63877
Iteration 820: error is 0.63877
Iteration 830: error is 0.63877
Iteration 840: error is 0.63877
Iteration 850: error is 0.63877
Iteration 860: error is 0.63877
Iteration 870: error is 0.63877
Iteration 880: error is 0.63877
Iteration 890: error is 0.63877
Iteration 900: error is 0.63877
Iteration 910: error is 0.63877
Iteration 920: error is 0.63877
Iteration 930: error is 0.63877
Iteration 940: error is 0.63877
Iteration 950: error is 0.63877
Iteration 960: error is 0.63877
Iteration 970: error is 0.63877
Iteration 980: error is 0.63877
Iteration 990: error is 0.63877
Iteration 1000: error is 0.63877
J_new = 0.8322
J_new = 0.8189
J_new = 0.8151
J_new = 0.8127
J_new = 0.8091
J_new = 0.8067
J_new = 0.7999
J_new = 0.7862
J_new = 0.7422
J_new = 0.7425
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 38.4837
Iteration 20: error is 37.0391
Iteration 30: error is 36.8406
Iteration 40: error is 36.7153
Iteration 50: error is 36.7781
Iteration 60: error is 36.465
Iteration 70: error is 37.3021
Iteration 80: error is 37.3999
Iteration 90: error is 37.0042
Iteration 100: error is 2.194
Iteration 110: error is 1.1954
Iteration 120: error is 0.83884
Iteration 130: error is 0.71019
Iteration 140: error is 0.68976
Iteration 150: error is 0.67965
Iteration 160: error is 0.6734
Iteration 170: error is 0.66825
Iteration 180: error is 0.66305
Iteration 190: error is 0.66041
```

Iteration 200: error is 0.65831
Iteration 210: error is 0.65669
Iteration 220: error is 0.65525
Iteration 230: error is 0.65412
Iteration 240: error is 0.65313
Iteration 250: error is 0.65225
Iteration 260: error is 0.65093
Iteration 270: error is 0.64942
Iteration 280: error is 0.64836
Iteration 290: error is 0.64758
Iteration 300: error is 0.647
Iteration 310: error is 0.64656
Iteration 320: error is 0.64621
Iteration 330: error is 0.64596
Iteration 340: error is 0.64571
Iteration 350: error is 0.64555
Iteration 360: error is 0.6454
Iteration 370: error is 0.64528
Iteration 380: error is 0.64518
Iteration 390: error is 0.64509
Iteration 400: error is 0.64501
Iteration 410: error is 0.64495
Iteration 420: error is 0.64489
Iteration 430: error is 0.64484
Iteration 440: error is 0.6448
Iteration 450: error is 0.64477
Iteration 460: error is 0.64474
Iteration 470: error is 0.64471
Iteration 480: error is 0.64469
Iteration 490: error is 0.64467
Iteration 500: error is 0.64465
Iteration 510: error is 0.64463
Iteration 520: error is 0.64462
Iteration 530: error is 0.64461
Iteration 540: error is 0.6446
Iteration 550: error is 0.64459
Iteration 560: error is 0.64458
Iteration 570: error is 0.64457
Iteration 580: error is 0.64457
Iteration 590: error is 0.64456
Iteration 600: error is 0.64456
Iteration 610: error is 0.64455
Iteration 620: error is 0.64455
Iteration 630: error is 0.64454
Iteration 640: error is 0.64454
Iteration 650: error is 0.64454
Iteration 660: error is 0.64454
Iteration 670: error is 0.64453
Iteration 680: error is 0.64453
Iteration 690: error is 0.64453
Iteration 700: error is 0.64453
Iteration 710: error is 0.64453
Iteration 720: error is 0.64453
Iteration 730: error is 0.64453
Iteration 740: error is 0.64452
Iteration 750: error is 0.64452
Iteration 760: error is 0.64452
Iteration 770: error is 0.64452
Iteration 780: error is 0.64452
Iteration 790: error is 0.64452
Iteration 800: error is 0.64452
Iteration 810: error is 0.64452
Iteration 820: error is 0.64452
Iteration 830: error is 0.64452
Iteration 840: error is 0.64452

```
Iteration 850: error is 0.64452
Iteration 860: error is 0.64452
Iteration 870: error is 0.64452
Iteration 880: error is 0.64452
Iteration 890: error is 0.64452
Iteration 900: error is 0.64452
Iteration 910: error is 0.64452
Iteration 920: error is 0.64452
Iteration 930: error is 0.64452
Iteration 940: error is 0.64452
Iteration 950: error is 0.64452
Iteration 960: error is 0.64452
Iteration 970: error is 0.64452
Iteration 980: error is 0.64452
Iteration 990: error is 0.64452
Iteration 1000: error is 0.64452
J_new = 0.8666
J_new = 0.8373
J_new = 0.8246
J_new = 0.8155
J_new = 0.8137
J_new = 0.8116
J_new = 0.8079
J_new = 0.8061
J_new = 0.8022
J_new = 0.7905
J_new = 0.7811
J_new = 0.7427
J_new = 0.7416
J_new = 0.7424
Mean value of sigma: 0.16017
Minimum value of sigma: 0.1114
Maximum value of sigma: 0.27312
Iteration 10: error is 39.7067
Iteration 20: error is 36.7748
Iteration 30: error is 36.5686
Iteration 40: error is 36.8591
Iteration 50: error is 37.1208
Iteration 60: error is 37.0643
Iteration 70: error is 37.0864
Iteration 80: error is 36.996
Iteration 90: error is 37.5749
Iteration 100: error is 2.2757
Iteration 110: error is 1.248
Iteration 120: error is 1.0093
Iteration 130: error is 0.83581
Iteration 140: error is 0.76915
Iteration 150: error is 0.67477
Iteration 160: error is 0.65931
Iteration 170: error is 0.65522
Iteration 180: error is 0.65188
Iteration 190: error is 0.64933
Iteration 200: error is 0.64723
Iteration 210: error is 0.64557
Iteration 220: error is 0.64411
Iteration 230: error is 0.64288
Iteration 240: error is 0.64181
Iteration 250: error is 0.64092
Iteration 260: error is 0.6395
Iteration 270: error is 0.6379
Iteration 280: error is 0.63675
Iteration 290: error is 0.63591
Iteration 300: error is 0.63527
Iteration 310: error is 0.63476
Iteration 320: error is 0.63437
```

Iteration 330: error is 0.63405
Iteration 340: error is 0.63379
Iteration 350: error is 0.63358
Iteration 360: error is 0.63341
Iteration 370: error is 0.63326
Iteration 380: error is 0.63314
Iteration 390: error is 0.63304
Iteration 400: error is 0.63296
Iteration 410: error is 0.63288
Iteration 420: error is 0.63283
Iteration 430: error is 0.63277
Iteration 440: error is 0.63272
Iteration 450: error is 0.63268
Iteration 460: error is 0.63264
Iteration 470: error is 0.63261
Iteration 480: error is 0.63259
Iteration 490: error is 0.63256
Iteration 500: error is 0.63254
Iteration 510: error is 0.63253
Iteration 520: error is 0.63251
Iteration 530: error is 0.63249
Iteration 540: error is 0.63248
Iteration 550: error is 0.63247
Iteration 560: error is 0.63246
Iteration 570: error is 0.63245
Iteration 580: error is 0.63244
Iteration 590: error is 0.63244
Iteration 600: error is 0.63243
Iteration 610: error is 0.63243
Iteration 620: error is 0.63242
Iteration 630: error is 0.63242
Iteration 640: error is 0.63241
Iteration 650: error is 0.63241
Iteration 660: error is 0.63241
Iteration 670: error is 0.6324
Iteration 680: error is 0.6324
Iteration 690: error is 0.6324
Iteration 700: error is 0.6324
Iteration 710: error is 0.6324
Iteration 720: error is 0.63239
Iteration 730: error is 0.63239
Iteration 740: error is 0.63239
Iteration 750: error is 0.63239
Iteration 760: error is 0.63239
Iteration 770: error is 0.63239
Iteration 780: error is 0.63239
Iteration 790: error is 0.63239
Iteration 800: error is 0.63239
Iteration 810: error is 0.63239
Iteration 820: error is 0.63239
Iteration 830: error is 0.63238
Iteration 840: error is 0.63238
Iteration 850: error is 0.63238
Iteration 860: error is 0.63238
Iteration 870: error is 0.63238
Iteration 880: error is 0.63238
Iteration 890: error is 0.63238
Iteration 900: error is 0.63238
Iteration 910: error is 0.63238
Iteration 920: error is 0.63238
Iteration 930: error is 0.63238
Iteration 940: error is 0.63238
Iteration 950: error is 0.63238
Iteration 960: error is 0.63238
Iteration 970: error is 0.63238

Iteration 980: error is 0.63238
 Iteration 990: error is 0.63238
 Iteration 1000: error is 0.63238
 J_new = 0.8447
 J_new = 0.8272
 J_new = 0.8162
 J_new = 0.8142
 J_new = 0.8120
 J_new = 0.8081
 J_new = 0.8065
 J_new = 0.8025
 J_new = 0.7909
 J_new = 0.7814
 J_new = 0.7431
 J_new = 0.7419
 J_new = 0.7428
 E_best = 0.1402

Iteration	Func-count	f(x)	Step-size	First-order optimality
0	1	0.763527		0.000736
1	5	0.754017	820	0.000355
2	6	0.7327	1	0.000999
3	7	0.716599	1	0.00257
4	9	0.710581	0.311225	0.00199
5	10	0.70728	1	0.00123
6	11	0.701632	1	0.000906
7	13	0.699183	0.392036	0.00149
8	15	0.695828	0.283505	0.00148
9	17	0.694815	0.301891	0.00182
10	19	0.692125	0.386666	0.00175
11	21	0.688459	0.583681	0.000945
12	23	0.687298	0.296377	0.000811
13	24	0.685379	1	0.000791
14	26	0.684276	0.461939	0.000599
15	28	0.68322	0.532405	0.000665
16	30	0.682079	0.555917	0.000486
17	31	0.68096	1	0.000618
18	32	0.680441	1	0.000784
19	33	0.679827	1	0.000763
First-order optimality				
Iteration	Func-count	f(x)	Step-size	First-order optimality
20	34	0.679743	1	0.000583
21	35	0.678852	1	0.000467
22	37	0.678291	0.522529	0.000351
23	39	0.677977	0.4686	0.000218
24	40	0.677868	1	0.000357
25	41	0.677457	1	0.0002
26	43	0.677229	0.5	0.000263
27	44	0.676911	1	0.000289
28	45	0.676151	1	0.000297
29	47	0.675785	0.233668	0.00026
30	49	0.675166	0.595627	0.000248
31	50	0.674646	1	0.000199
32	52	0.674318	0.421403	0.00026
33	53	0.674101	1	0.000188
34	54	0.673865	1	0.000124
35	56	0.673771	0.48407	0.000128
36	57	0.673623	1	0.000133
37	58	0.673436	1	0.000213
38	59	0.673269	1	0.000163
39	60	0.67315	1	0.000114
First-order optimality				
Iteration	Func-count	f(x)	Step-size	First-order optimality
40	61	0.67287	1	0.000138
41	63	0.672619	0.1	0.000226

42	66	0.672462	0.0144111	0.000291
43	68	0.672321	0.13193	0.000273
44	69	0.672167	1	0.00022
45	70	0.671922	1	0.000131
46	71	0.67165	1	0.000159
47	72	0.671373	1	0.000241
48	73	0.671034	1	0.000234
49	75	0.670714	0.349633	0.000217
50	76	0.670665	1	0.000454
51	77	0.670606	1	0.000262
52	78	0.670033	1	0.000161
53	79	0.66992	1	0.000198
54	80	0.669658	1	0.000207
55	82	0.669227	0.200617	0.000177
56	84	0.669128	0.197233	0.00016
57	85	0.668933	1	0.000164
58	87	0.668726	0.54724	0.000165
59	88	0.668616	1	4.92e-05
First-order				
Iteration	Func-count	f(x)	Step-size	optimality
60	89	0.668598	1	0.000102
61	90	0.668548	1	0.000106
62	91	0.668467	1	9.24e-05
63	94	0.668001	1.3072	0.000326
64	96	0.667962	0.1	0.000315
65	97	0.667635	1	0.000135
66	98	0.667501	1	8.98e-05
67	99	0.667445	1	8.23e-05
68	100	0.667408	1	6.66e-05
69	101	0.667376	1	3.38e-05
70	102	0.667324	1	5.79e-05
71	104	0.667243	0.5	6.43e-05
72	105	0.66721	1	0.000114
73	106	0.667159	1	3.99e-05
74	107	0.667107	1	4.06e-05
75	109	0.667033	0.272717	6.81e-05
76	111	0.667006	0.582006	9.03e-05
77	112	0.666981	1	4.24e-05
78	113	0.666959	1	2.46e-05
79	114	0.666944	1	6.12e-05
First-order				
Iteration	Func-count	f(x)	Step-size	optimality
80	115	0.66692	1	5.6e-05
81	116	0.666816	1	9.07e-05
82	118	0.666803	0.13	8.99e-05
83	119	0.666747	1	0.000154
84	120	0.666713	1	3.93e-05
85	121	0.666705	1	2.51e-05
86	122	0.666697	1	1.97e-05
87	123	0.666686	1	3.46e-05
88	124	0.666673	1	3.34e-05
89	125	0.666646	1	3.29e-05
90	126	0.66663	1	4.13e-05
91	127	0.666608	1	1.56e-05
92	128	0.666597	1	1.63e-05
93	129	0.66658	1	2.56e-05
94	132	0.666521	1.9	0.000121
95	134	0.666509	0.15956	0.000111
96	135	0.666458	1	0.000127
97	136	0.666404	1	5.84e-05
98	137	0.666371	1	2.23e-05
99	138	0.666364	1	2.32e-05
First-order				
Iteration	Func-count	f(x)	Step-size	optimality
100	139	0.666359	1	1.3e-05

101	140	0.666357	1	1.26e-05
102	141	0.666355	1	1.68e-05
103	142	0.66635	1	1.28e-05
104	143	0.666344	1	9.5e-06
105	144	0.666338	1	1.36e-05
106	145	0.666332	1	1.78e-05
107	146	0.666324	1	2.61e-05
108	147	0.66632	1	1.06e-05
109	148	0.666315	1	1.16e-05
110	149	0.666313	1	1.58e-05
111	150	0.66631	1	1.4e-05
112	151	0.666305	1	1.24e-05
113	152	0.666298	1	2.18e-05
114	153	0.666284	1	3.31e-05
115	154	0.66627	1	5.4e-05
116	155	0.666236	1	5.97e-05
117	157	0.666131	0.5	9.52e-05
118	159	0.666119	0.1	7.18e-05
119	160	0.66605	1	0.000128
First-order optimality				
Iteration	Func-count	f(x)	Step-size	
120	161	0.665988	1	4.37e-05
121	162	0.665951	1	3.77e-05
122	163	0.665923	1	4.24e-05
123	164	0.665899	1	4.04e-05
124	165	0.665878	1	3.27e-05
125	166	0.665861	1	4.39e-05
126	171	0.665683	2.16043	0.000171
127	174	0.665679	0.0214438	0.000175
128	175	0.665588	1	6.28e-05
129	176	0.665506	1	3.78e-05
130	177	0.66549	1	2.26e-05
131	178	0.665483	1	1.3e-05
132	179	0.665479	1	8.85e-06
133	180	0.665476	1	1.17e-05
134	181	0.665473	1	6.12e-06
135	182	0.665471	1	8.73e-06
136	183	0.665468	1	9.95e-06
137	184	0.665462	1	1.33e-05
138	185	0.665453	1	1.71e-05
139	187	0.665442	0.620579	3.55e-05
First-order optimality				
Iteration	Func-count	f(x)	Step-size	
140	188	0.665427	1	3.85e-05
141	189	0.665417	1	2.29e-05
142	190	0.665396	1	2.39e-05
143	191	0.665387	1	2.9e-05
144	192	0.665376	1	3.21e-05
145	194	0.665355	0.5	3.6e-05
146	196	0.665345	0.622345	3.31e-05
147	197	0.665333	1	1.55e-05
148	198	0.665327	1	7.6e-06
149	199	0.665325	1	1.26e-05
150	200	0.665322	1	1.03e-05
151	201	0.665318	1	1.29e-05
152	206	0.665272	2.39936	6.64e-05
153	209	0.665269	0.0565946	7.02e-05
154	210	0.665224	1	3.67e-05
155	211	0.66517	1	1.96e-05
156	212	0.665154	1	2.2e-05
157	213	0.665144	1	2.99e-05
158	219	0.66503	4.0951	0.000126
159	222	0.665024	0.0592563	0.000126
First-order optimality				
Iteration	Func-count	f(x)	Step-size	

160	223	0.664884	1	5.76e-05
161	224	0.664843	1	1.54e-05
162	225	0.664829	1	1.21e-05
163	226	0.664823	1	1.36e-05
164	227	0.664819	1	1.56e-05
165	228	0.664811	1	2.19e-05
166	236	0.664597	4.18766	0.000129
167	240	0.664596	0.0048061	0.000131
168	241	0.66452	1	9.76e-05
169	242	0.664396	1	2.01e-05
170	243	0.664376	1	2.2e-05
171	244	0.664371	1	1.56e-05
172	245	0.664368	1	8.71e-06
173	246	0.664367	1	3.23e-06
174	247	0.664365	1	3.47e-06
175	248	0.664364	1	4.4e-06
176	249	0.664363	1	4.41e-06
177	250	0.664361	1	4.63e-06
178	251	0.664359	1	4.5e-06
179	252	0.664357	1	4.88e-06

First-order

Iteration	Func-count	f(x)	Step-size	optimality
180	253	0.664355	1	4.63e-06
181	254	0.664352	1	5.58e-06
182	255	0.66435	1	5.56e-06
183	256	0.664349	1	4.67e-06
184	257	0.664347	1	4.99e-06
185	258	0.664345	1	5.35e-06
186	259	0.664343	1	5.6e-06
187	260	0.664339	1	8.47e-06
188	264	0.664304	1.68704	9.76e-05
189	268	0.664303	0.00774899	0.000106
190	269	0.664286	1	5.79e-05
191	270	0.664237	1	4.33e-05
192	271	0.6642	1	4.2e-05
193	272	0.664177	1	2.26e-05
194	273	0.664162	1	2.35e-05
195	274	0.664152	1	2.62e-05
196	275	0.664138	1	3.26e-05
197	276	0.664113	1	3.4e-05
198	278	0.664101	0.648341	3.18e-05
199	279	0.664085	1	2.35e-05

First-order

Iteration	Func-count	f(x)	Step-size	optimality
200	280	0.664075	1	2.16e-05
201	281	0.664063	1	1.57e-05
202	282	0.664057	1	1.69e-05
203	283	0.664051	1	8.86e-06
204	284	0.664046	1	9.34e-06
205	285	0.664043	1	6.34e-06
206	286	0.664042	1	5.48e-06
207	287	0.664039	1	4.31e-06
208	288	0.664038	1	4.12e-06
209	289	0.664036	1	3.84e-06
210	290	0.664035	1	3.94e-06
211	291	0.664034	1	4.37e-06
212	292	0.664032	1	3.31e-06
213	293	0.664031	1	3.24e-06
214	294	0.66403	1	3.43e-06
215	295	0.664029	1	3.66e-06
216	296	0.664029	1	2.91e-06
217	297	0.664028	1	2.37e-06
218	298	0.664027	1	3.27e-06
219	299	0.664027	1	5.45e-06

First-order

Iteration	Func-count	f(x)	Step-size	optimality
220	300	0.664026	1	5.82e-06
221	301	0.664025	1	3.95e-06
222	302	0.664024	1	3.58e-06
223	303	0.664022	1	3.94e-06
224	304	0.664021	1	4.87e-06
225	305	0.66402	1	4.89e-06
226	306	0.664018	1	4.66e-06
227	307	0.664016	1	8.32e-06
228	308	0.664014	1	1.75e-05
229	309	0.664012	1	4.15e-05
230	310	0.664004	1	2.22e-05
231	311	0.663825	1	0.000121
232	314	0.663824	0.0119259	0.000129
233	315	0.663731	1	0.00018
234	318	0.66351	0.353871	0.000365
235	320	0.663474	0.1	0.000437
236	321	0.66331	1	0.000137
237	322	0.663214	1	9.93e-05
238	323	0.663143	1	4.66e-05
239	324	0.663129	1	1.95e-05
First-order optimality				
Iteration	Func-count	f(x)	Step-size	optimality
240	325	0.663119	1	1.37e-05
241	326	0.663115	1	1.67e-05
242	327	0.663112	1	2.33e-05
243	328	0.663108	1	2.23e-05
244	329	0.663104	1	1.4e-05
245	330	0.663101	1	7.76e-06
246	331	0.663099	1	7.58e-06
247	332	0.663098	1	9.59e-06
248	333	0.663096	1	7.07e-06
249	334	0.663095	1	4.75e-06
250	335	0.663094	1	5.29e-06
251	336	0.663092	1	6.34e-06
252	337	0.66309	1	8.92e-06
253	338	0.663088	1	8.12e-06
254	339	0.663086	1	6.58e-06
255	340	0.663084	1	4.87e-06
256	341	0.663083	1	5.98e-06
257	342	0.663081	1	5.46e-06
258	343	0.663079	1	4.91e-06
259	344	0.663077	1	5.12e-06
First-order optimality				
Iteration	Func-count	f(x)	Step-size	optimality
260	345	0.663074	1	5.34e-06
261	346	0.663072	1	6.42e-06
262	347	0.663069	1	7.5e-06
263	348	0.663066	1	8.7e-06
264	349	0.663063	1	1.2e-05
265	350	0.663062	1	1.12e-05
266	351	0.663057	1	1.05e-05
267	352	0.663052	1	1.13e-05
268	353	0.66305	1	6.05e-06
269	354	0.663048	1	4.63e-06
270	356	0.663048	0.33251	3.54e-06
271	357	0.663047	1	3.17e-06
272	358	0.663047	1	2.55e-06
273	359	0.663046	1	2.96e-06
274	360	0.663046	1	2.33e-06
275	361	0.663046	1	1.82e-06
276	362	0.663046	1	2.57e-06
277	363	0.663045	1	2.81e-06
278	364	0.663045	1	2.63e-06
279	365	0.663044	1	3.33e-06

Iteration	Func-count	f(x)	Step-size	First-order optimality
280	366	0.663044	1	4.18e-06
281	367	0.663043	1	3.4e-06
282	368	0.663042	1	3.25e-06
283	369	0.663042	1	3.86e-06
284	370	0.663041	1	3.66e-06
285	371	0.66304	1	4.82e-06
286	372	0.663039	1	3.99e-06
287	373	0.663037	1	4.24e-06
288	374	0.663036	1	5.33e-06
289	376	0.663035	0.465896	1.37e-05
290	377	0.663033	1	8.61e-06
291	378	0.663031	1	5.47e-06
292	379	0.663029	1	5.25e-06
293	380	0.663027	1	2.16e-05
294	381	0.663025	1	9.68e-06
295	384	0.663015	1.9	3.56e-05
296	387	0.663011	0.01	5.77e-05
297	389	0.663007	0.5	6.14e-05
298	390	0.662997	1	3.29e-05
299	391	0.662986	1	3.43e-05
First-order optimality				
Iteration	Func-count	f(x)	Step-size	First-order optimality
300	392	0.66297	1	3.33e-05
301	393	0.662962	1	9.22e-06
302	394	0.662956	1	9.51e-06
303	395	0.662953	1	6e-06
304	396	0.66295	1	7.43e-06
305	397	0.662949	1	6.89e-06
306	398	0.662947	1	4.31e-06
307	399	0.662946	1	2.71e-06
308	400	0.662946	1	1.94e-06
309	401	0.662946	1	1.92e-06
310	402	0.662945	1	2.3e-06
311	403	0.662945	1	2.54e-06
312	404	0.662945	1	2.12e-06
313	405	0.662945	1	1.4e-06
314	406	0.662944	1	1.76e-06
315	407	0.662944	1	1.86e-06
316	408	0.662944	1	1.31e-06
317	409	0.662944	1	1.59e-06
318	410	0.662944	1	1.66e-06
319	411	0.662944	1	1.56e-06
First-order optimality				
Iteration	Func-count	f(x)	Step-size	First-order optimality
320	412	0.662943	1	1.29e-06
321	413	0.662943	1	1.12e-06
322	414	0.662943	1	1.1e-06
323	415	0.662943	1	1.36e-06
324	416	0.662943	1	1.79e-06
325	417	0.662943	1	2.42e-06
326	418	0.662942	1	2.48e-06
327	419	0.662942	1	1.79e-06
328	420	0.662942	1	2.01e-06
329	421	0.662941	1	2.55e-06
330	422	0.662941	1	3.55e-06
331	423	0.66294	1	4.6e-06
332	424	0.66294	1	4.45e-06
333	425	0.662939	1	4.55e-06
334	426	0.662937	1	4.48e-06
335	427	0.662936	1	5.73e-06
336	429	0.662935	0.181004	4.31e-06
337	430	0.662934	1	5.16e-06
338	431	0.662932	1	6.21e-06

Iteration	Func-count	f(x)	Step-size	First-order optimality
339	432	0.66293	1	7.07e-06
340	433	0.662929	1	1.19e-05
341	434	0.662926	1	5.91e-06
342	435	0.662924	1	5.28e-06
343	436	0.662923	1	4.18e-06
344	437	0.662922	1	4.13e-06
345	438	0.662921	1	3.2e-06
346	439	0.66292	1	3.28e-06
347	440	0.662919	1	3.34e-06
348	441	0.662918	1	2.61e-06
349	442	0.662918	1	2.26e-06
350	443	0.662918	1	1.76e-06
351	444	0.662918	1	1.09e-06
352	445	0.662918	1	9.99e-07

Optimization completed: The first-order optimality measure, 9.978914e-07, is less than options.OptimalityTolerance = 1.000000e-06.

Elapsed time is 54.225129 seconds.

```
toc;
```

Elapsed time is 54.230695 seconds.

```
class_order = Output.class_order;
data_perm = Output.data_perm;
k = par.K_cluster;
perm_class = Output.perm_class;
```

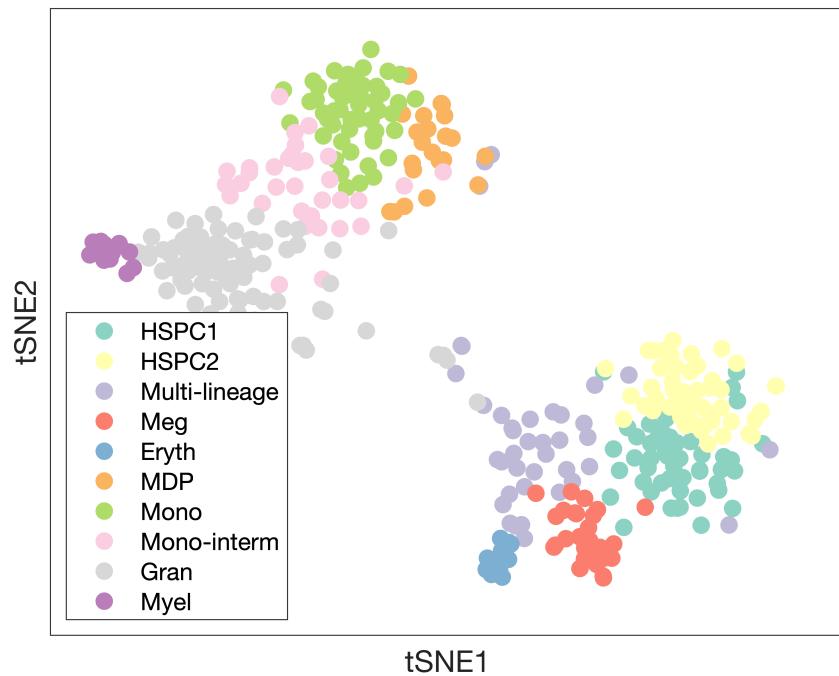
Cell-fate Landscape

embeddings and centers

```
name_exp = {'HSPC1','HSPC2','Meg','Eryth','Multi-lin','MDP','Mono','Gran','Myel'};
name_cluster = {'HSPC1','HSPC2','Multi-lineage','Meg','Eryth','MDP','Mono','Mono-interm','Gran'};
colors_exp = brewermap(9,'paired');
colors_cluster = brewermap(k,'set3');
labs_perm = Output.labs_perm;

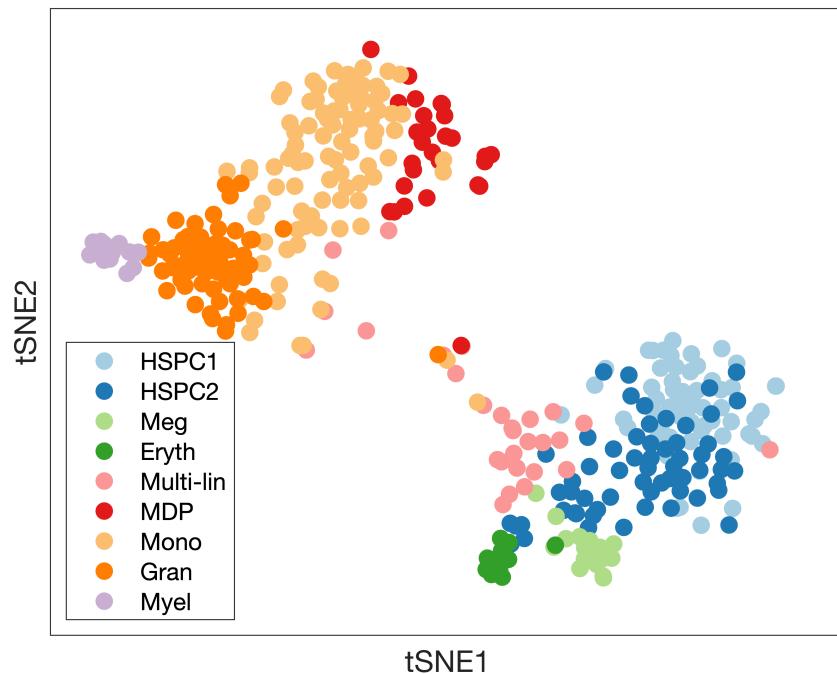
Output.embedding_2d = score_tsne(perm_class,:);
score_2d = score_tsne(perm_class,:);

figure;
gscatter(score_2d(:,1),score_2d(:,2),class_order,colors_cluster,[],30);
legend(name_cluster,'FontSize',12,'Location','SouthWest')
set(gca,'xtick',[],'ytick',[]);
xlabel('tSNE1','FontSize',15)
ylabel('tSNE2','FontSize',15)
```



```
Output.embedding_2d = score_2d;

figure;
gscatter(score_2d(:,1),score_2d(:,2),labs_perm,colors_exp,[],30);
legend(name_exp,'Fontsize',12,'Location','SouthWest')
set(gca,'xtick',[],'ytick',[]);
xlabel('tSNE1','Fontsize',15)
ylabel('tSNE2','Fontsize',15)
```



```
Output.embedding_2d = score_2d;
```

Construct landscape

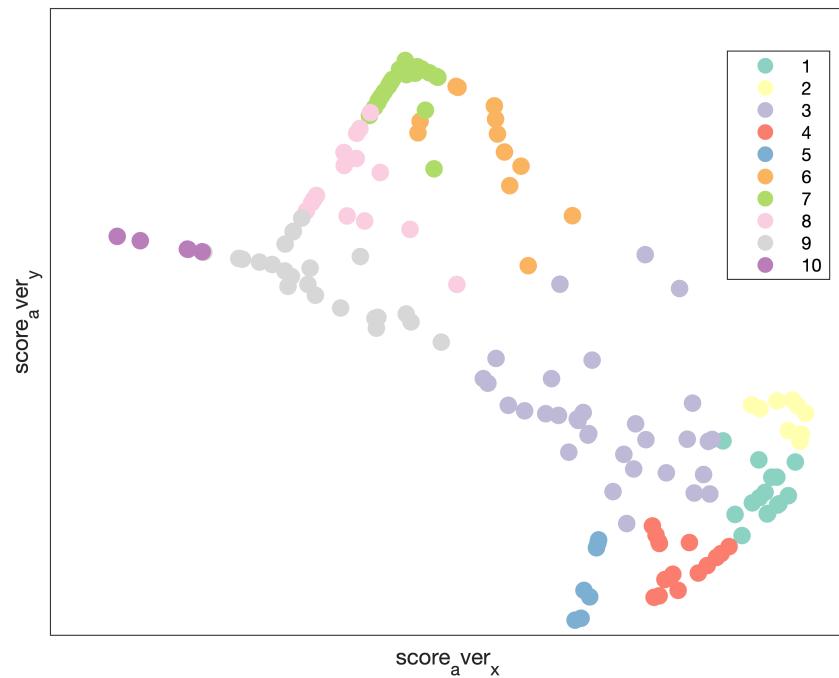
```

par.thresh_calc_center = 0.9;
par.thresh_calc_cov = 0.2;
par.N_mesh = 1000;
par.mksize = 30;
par.scaleaxis = 1.1;
par.scalevalue = 1.1;
par.fontsize = 30;
par.alpha = 0.4;

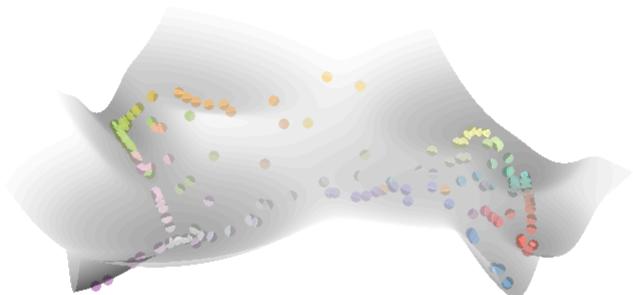
par.plot_label = class_order;
par.legend_text = name_cluster;
par.colors = colors_cluster;
par.color_mixing = true;

land = ConstructLandscape (Output, par);

```

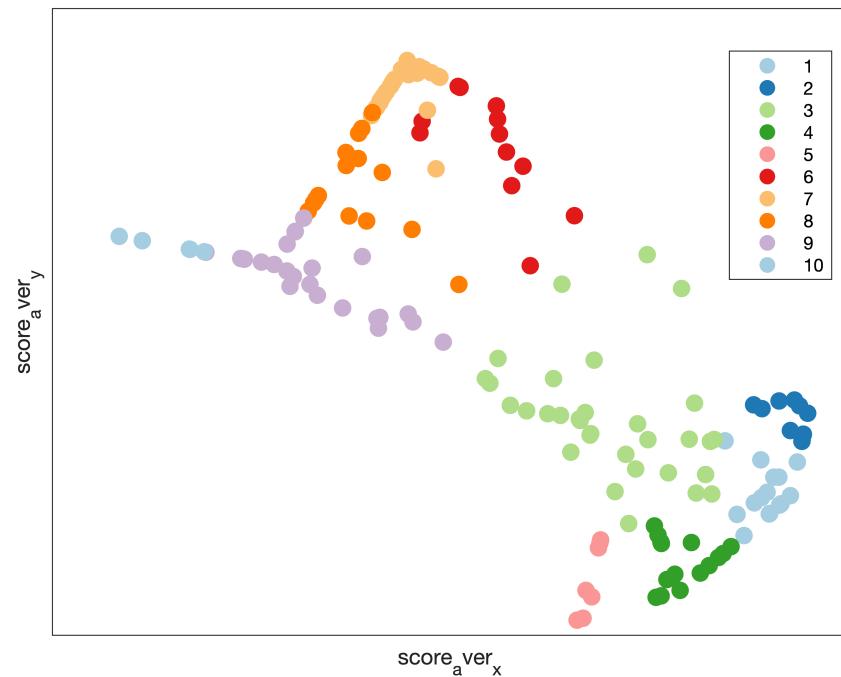


```
view([-46 81])
```

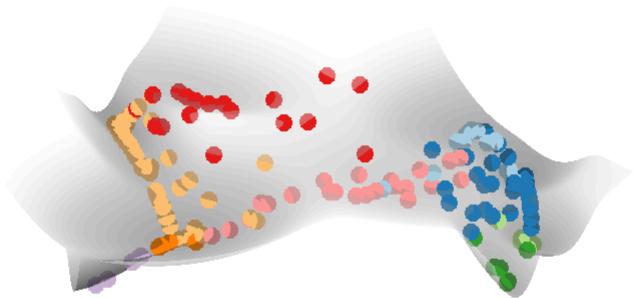


```
%colored by true label
par.color_mixing = false;
par.colors = colors_exp ;
par.legend_text = name_exp;
```

```
labs_perm = Output.labs_perm;
par.plot_label = labs_perm;
land = ConstructLandscape (Output, par);
```



```
view([-46 81])
```

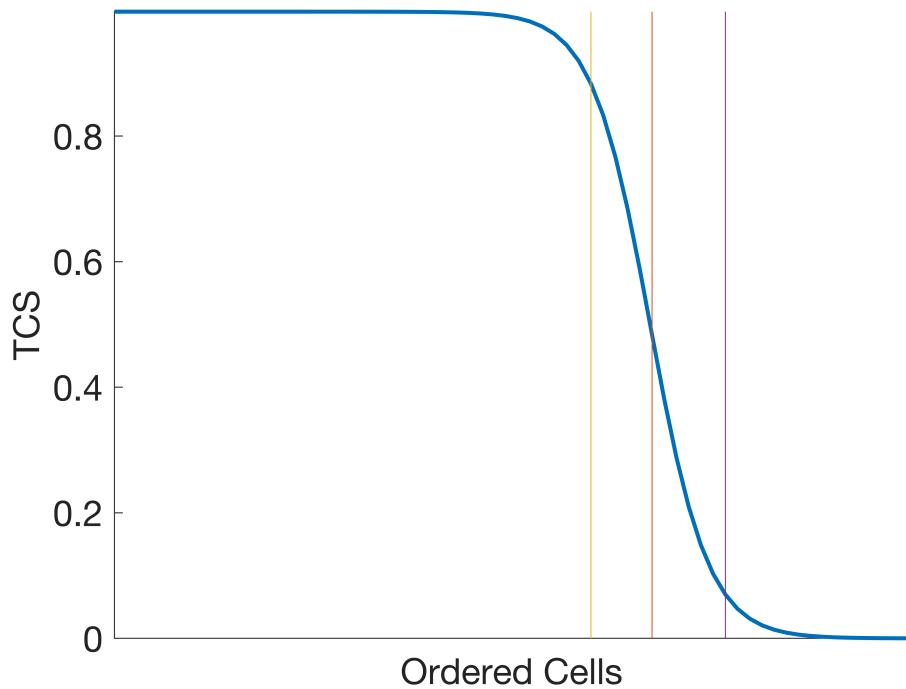


Transcendental transigion cell and gene analysis

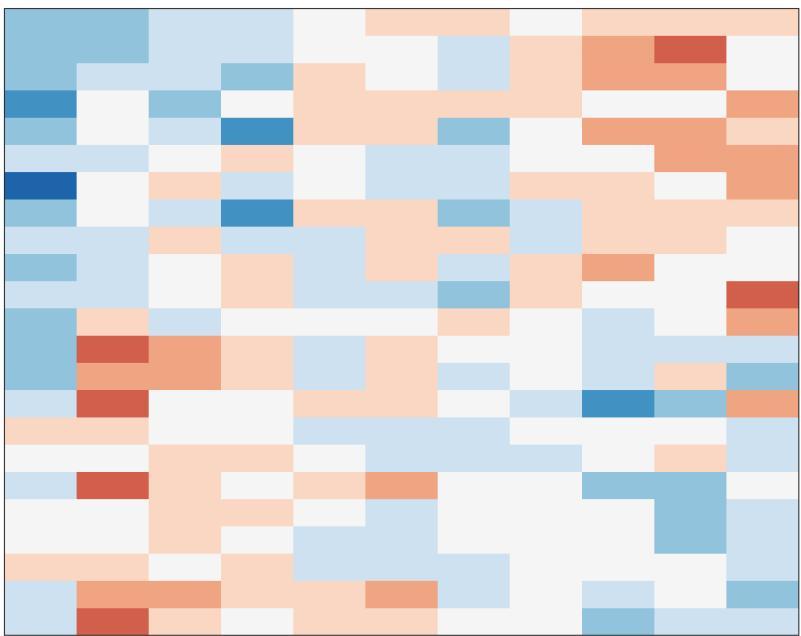
```
genes = gene_name_select;
par.genes = genes;
par.true_labs = labs_perm;
par.thresh_otherkeep = 0.2;
par.thresh_de_pvalues = 5e-3;
par.thresh_ms_pvalues = 1e-2;
par.thresh_tcs = 0.4;
par.thresh_td_genes = 0.4;
par.colors = colors_cluster ;

par.flip = false;
par.display_genes_label = false;

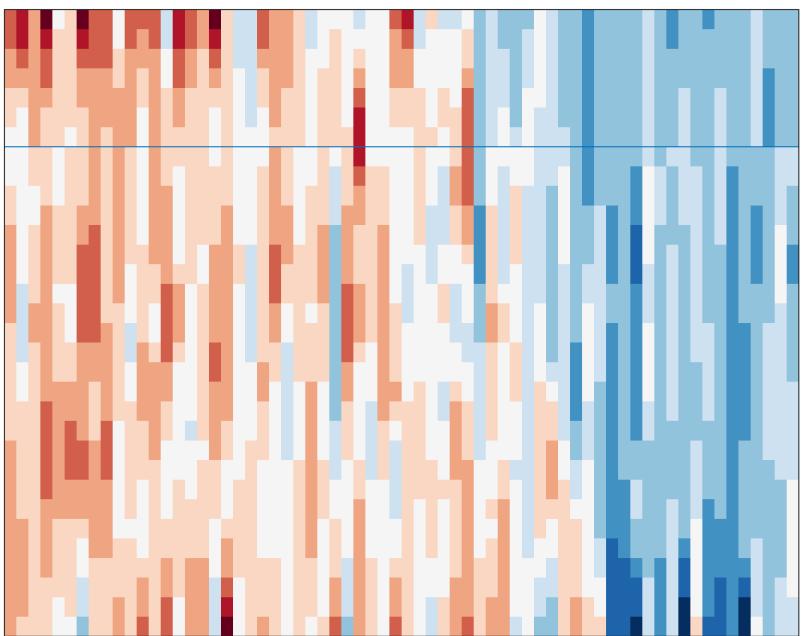
% check the state id before preceeding due to possible randomness of
% clustering id. Results unchanged.
out_14 = GeneAnalysis(1, 4, Output,par);
```



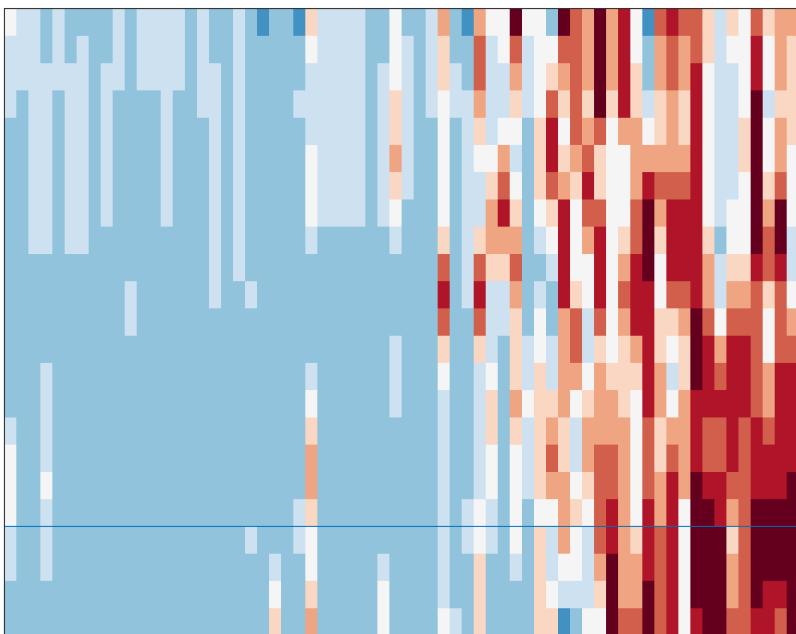
Below is the heatmap of transition genes



Below is the heatmap of down-regulated MS/IH genes

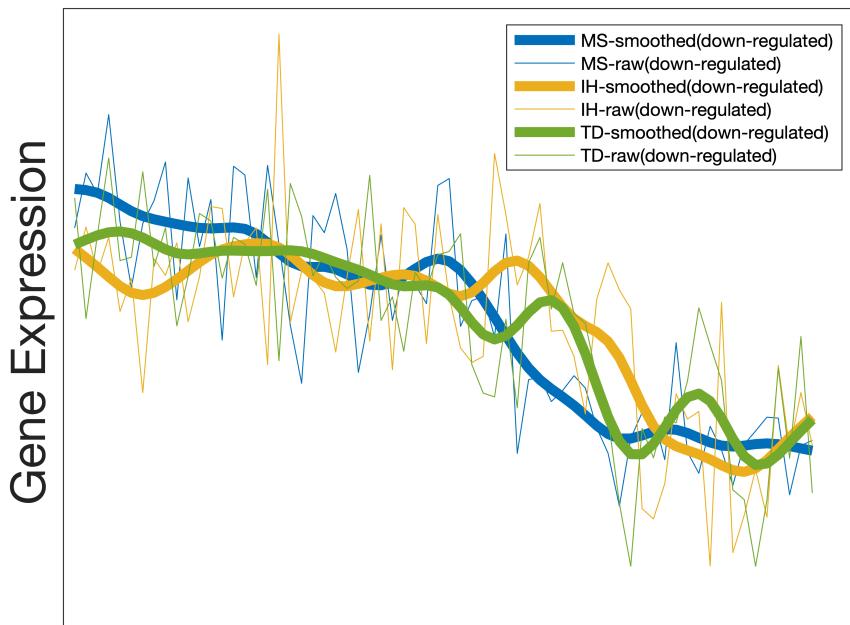


Below is the heatmap of up-regulated MS/IH genes

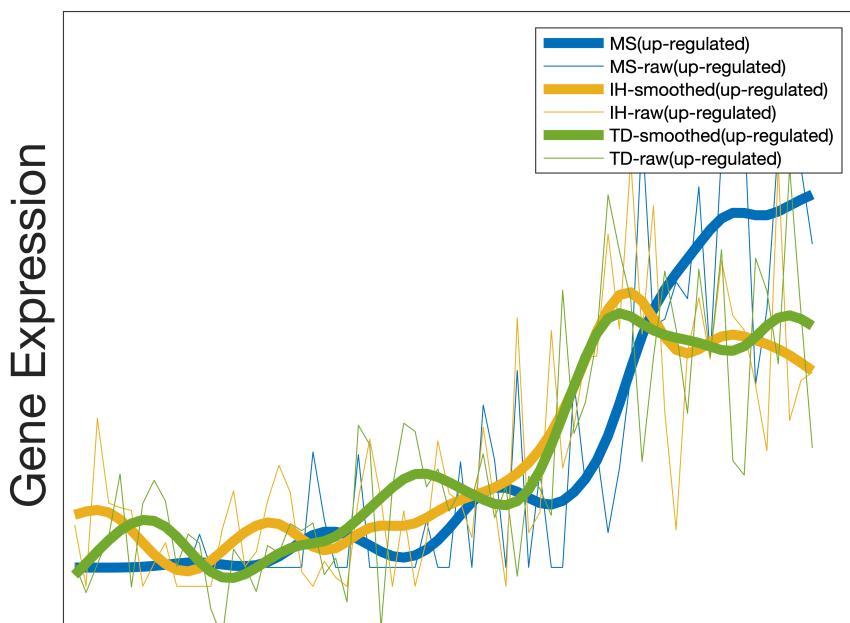


Below is the gradual cell identity change of the interested process



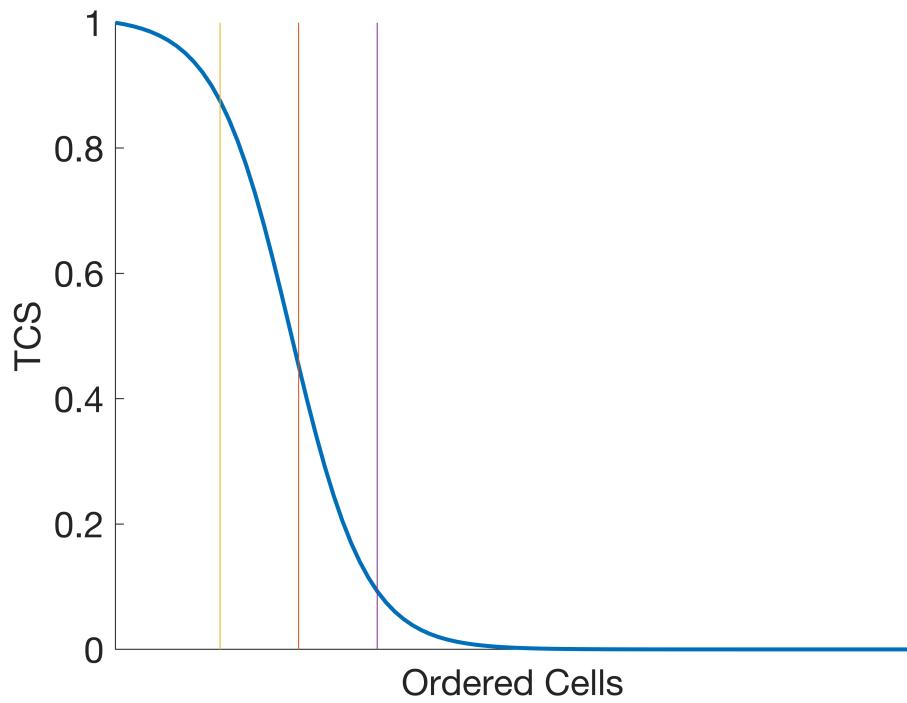


Ordered Cells

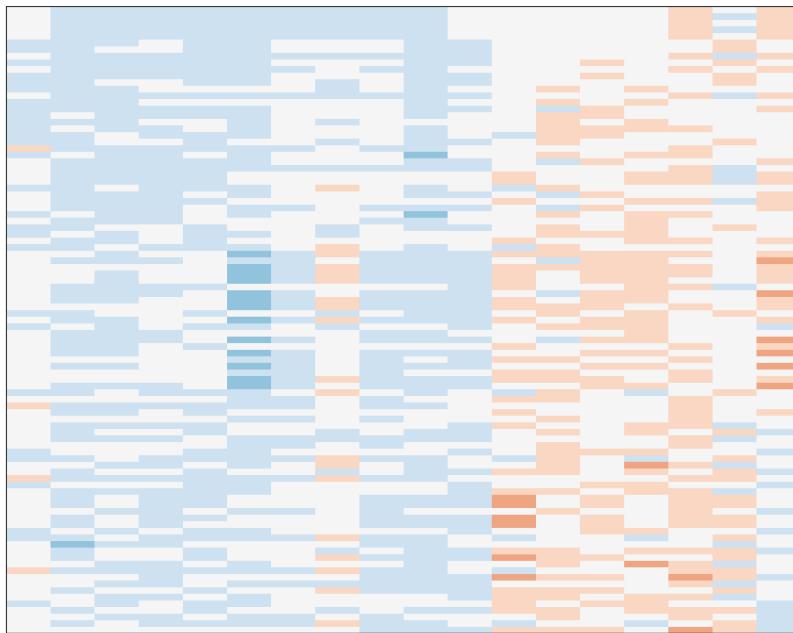


Ordered Cells

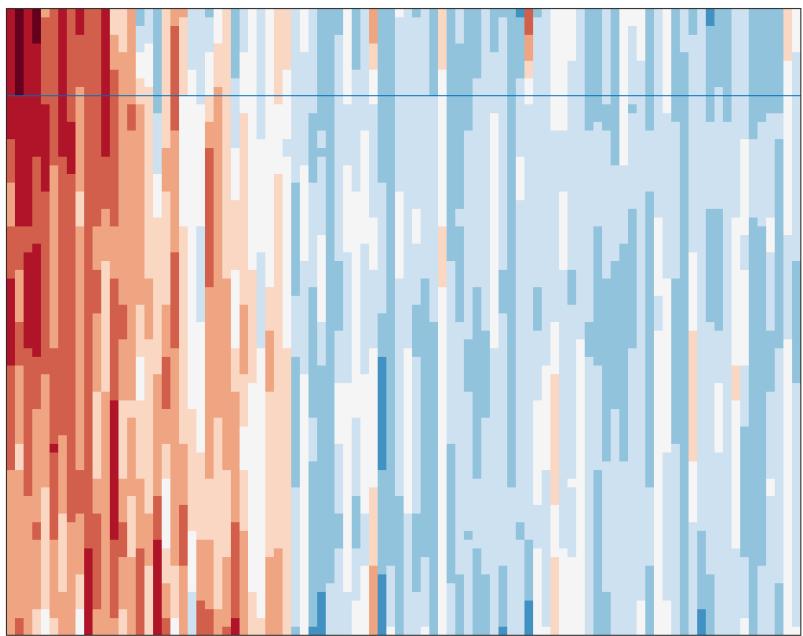
```
par.L_select_top_genes = 5;
out_39 = GeneAnalysis(3, 9, Output, par);
```



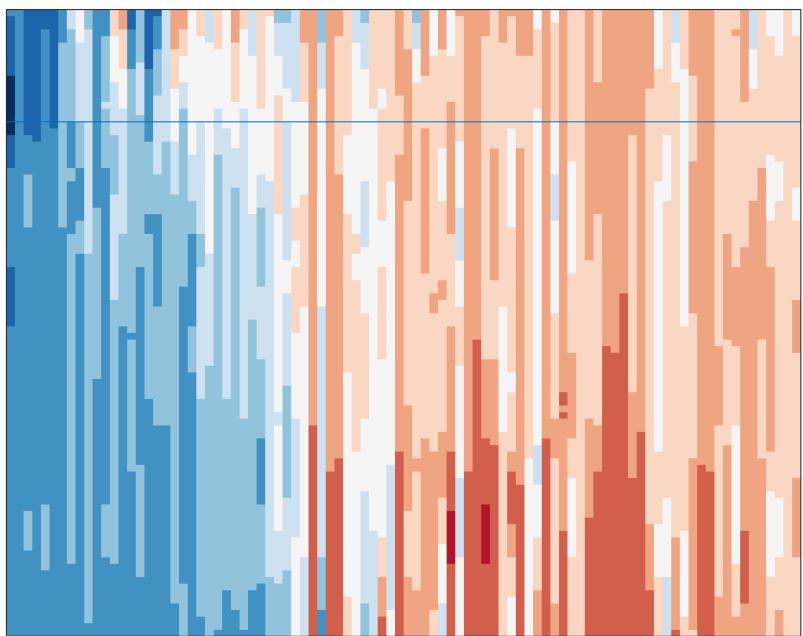
Below is the heatmap of transition genes



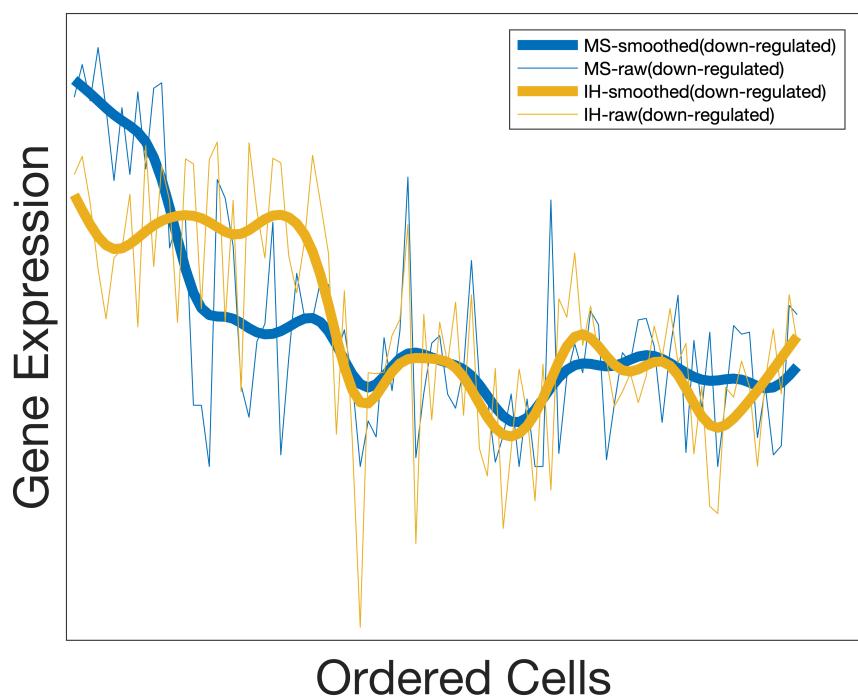
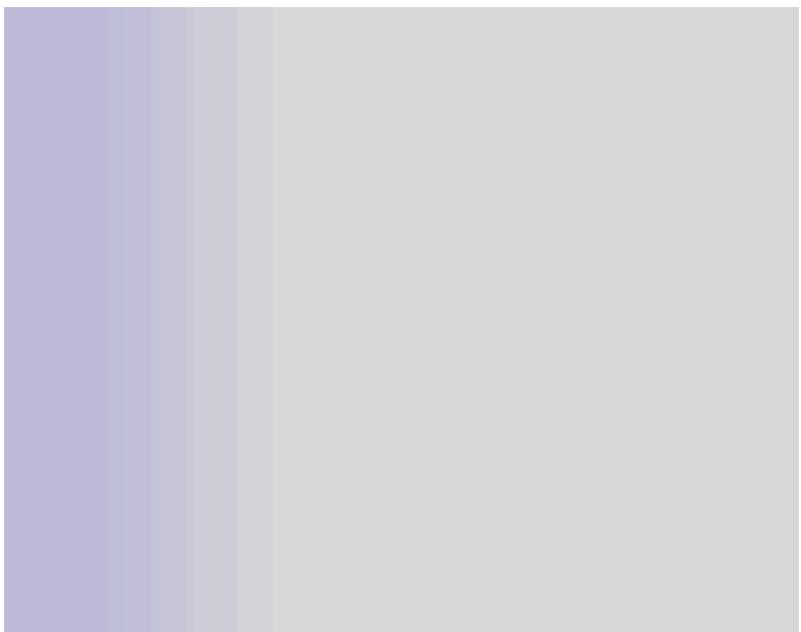
Below is the heatmap of down-regulated MS/IH genes

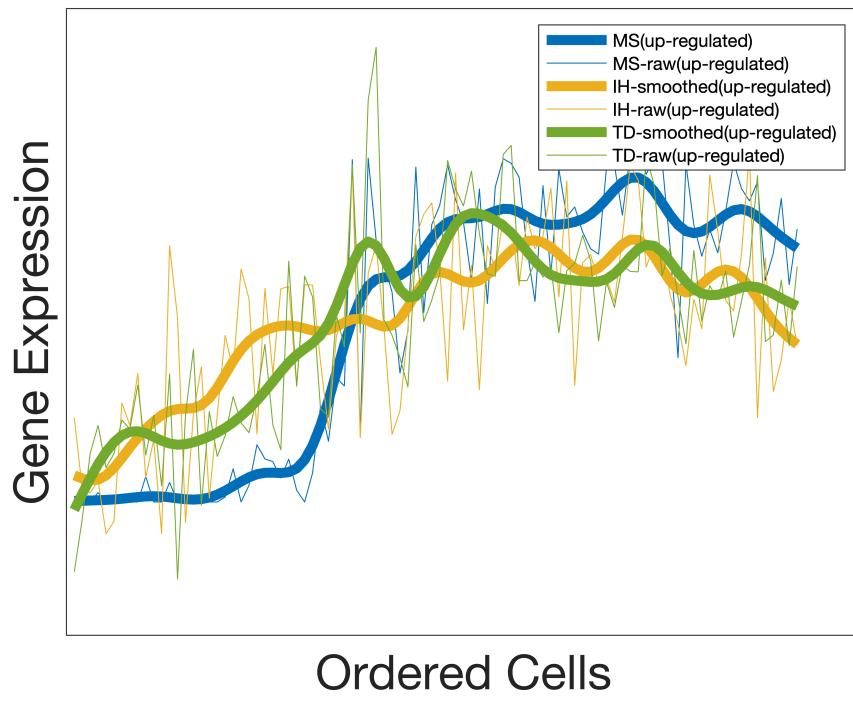


Below is the heatmap of up-regulated MS/IH genes



Below is the gradual cell identity change of the interested process

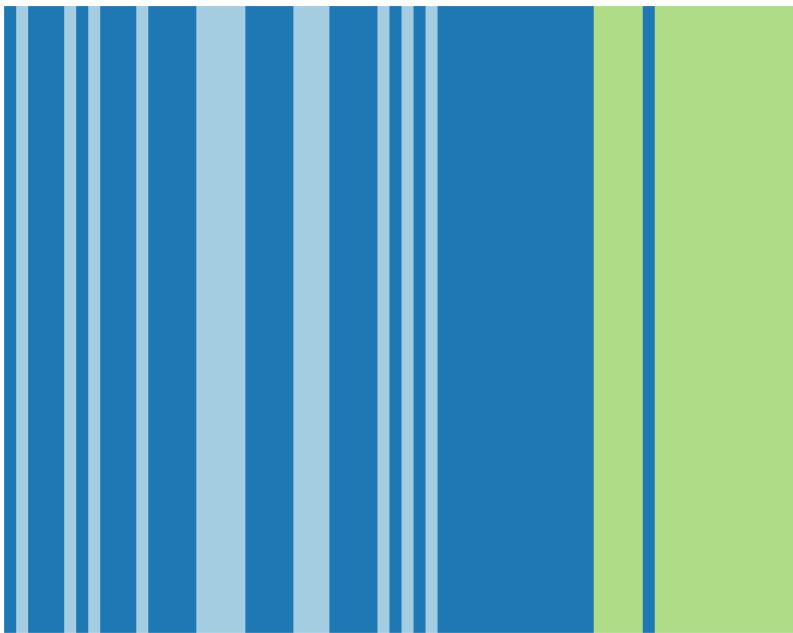




```

figure;
imagesc(out_14.cell_true_lab')
colormap(colors_exp)
caxis([1 10])
axis off
set(gca, 'xtick',[], 'ytick',[]);
box off

```

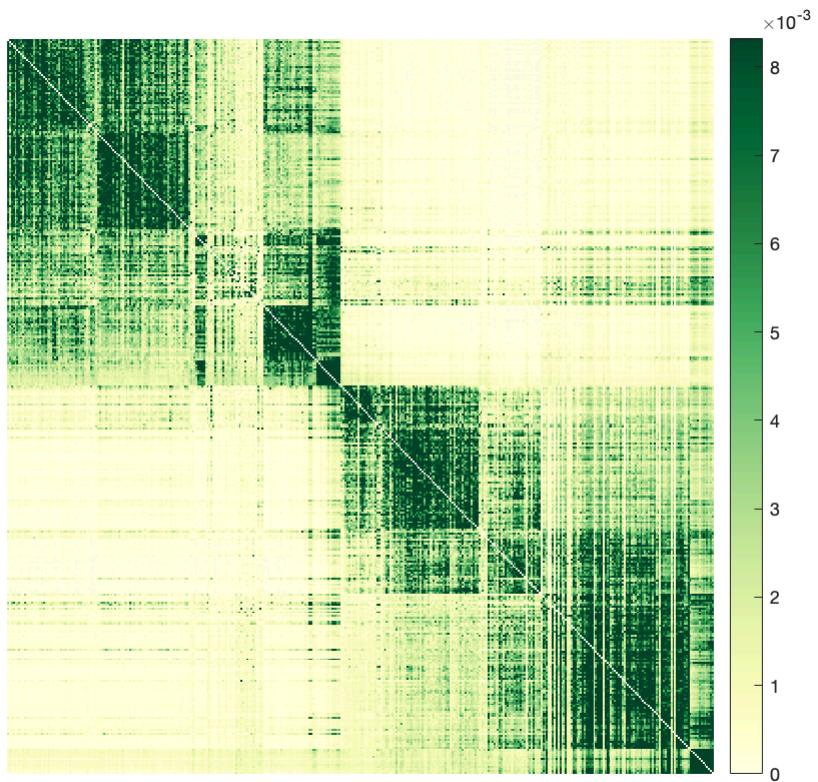


output other data in Supplementary

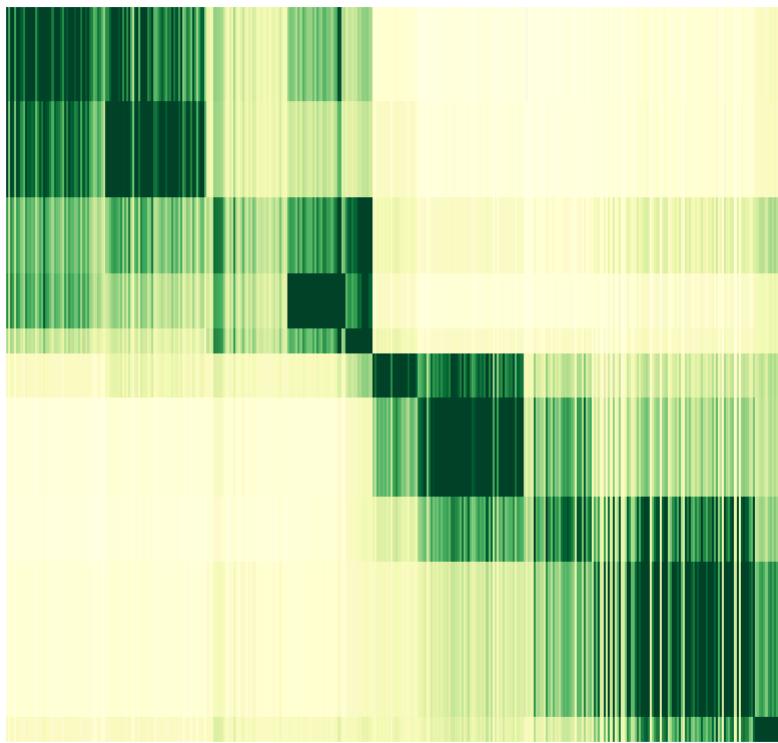
```
rho_class = Output.rho_class;
perm_class = Output.perm_class;
P_hat = Output.P_hat;
P_appr_perm = Output.P_appr_perm;
P_perm = Output.P_perm;
P_rho = Output.P_rho;
labs_perm = Output.labs_perm;
mu_hat = Output.mu_hat;
k = Output.k;
H = Output.H;

max_P = 0.2* max(max(P_rho));
c_lim = [0 max_P];
cmp = 'ylgn';

figure('rend','painters','pos',[10 10 500 450])
colormap(brewermap([],cmp))
imagesc(P_perm);
axis off
set(gca,'xtick',[],'ytick',[]);
caxis(c_lim)
colorbar;
```

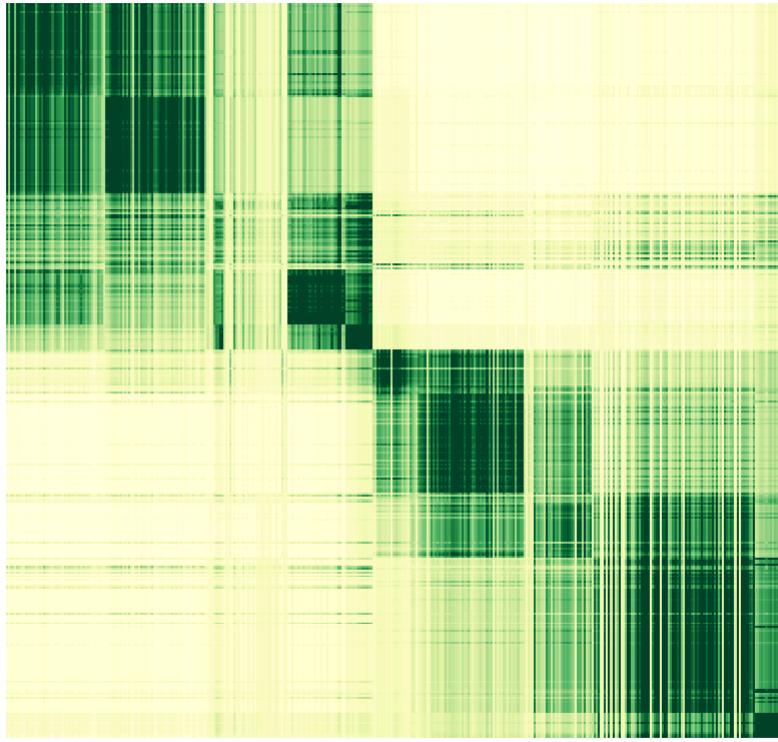


```
figure('rend','painters','pos',[10 10 500 450])
colormap(brewermap([],cmp))
imagesc(P_appr_perm);
axis off
set(gca,'xtick',[],'ytick',[]);
caxis(c_lim)
```

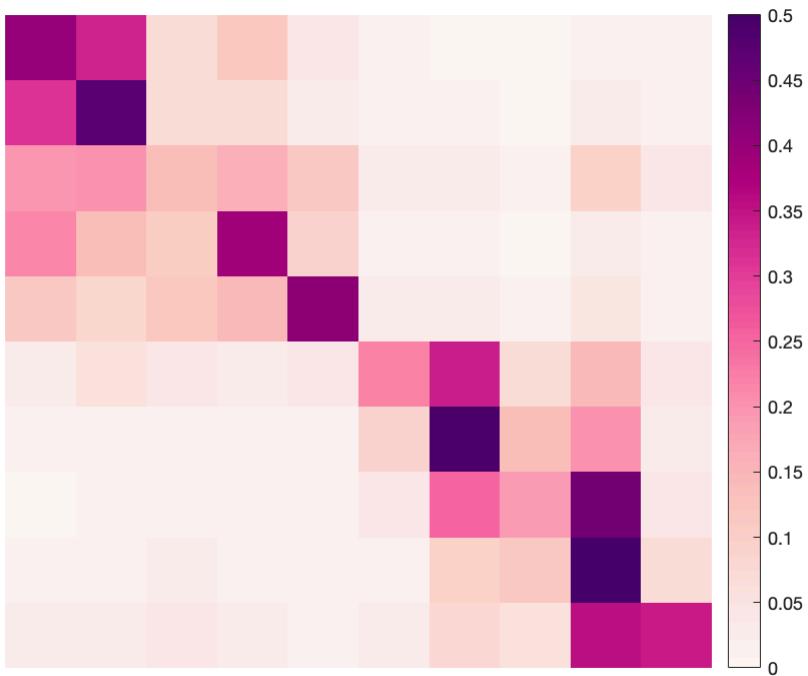


```
%colorbar;

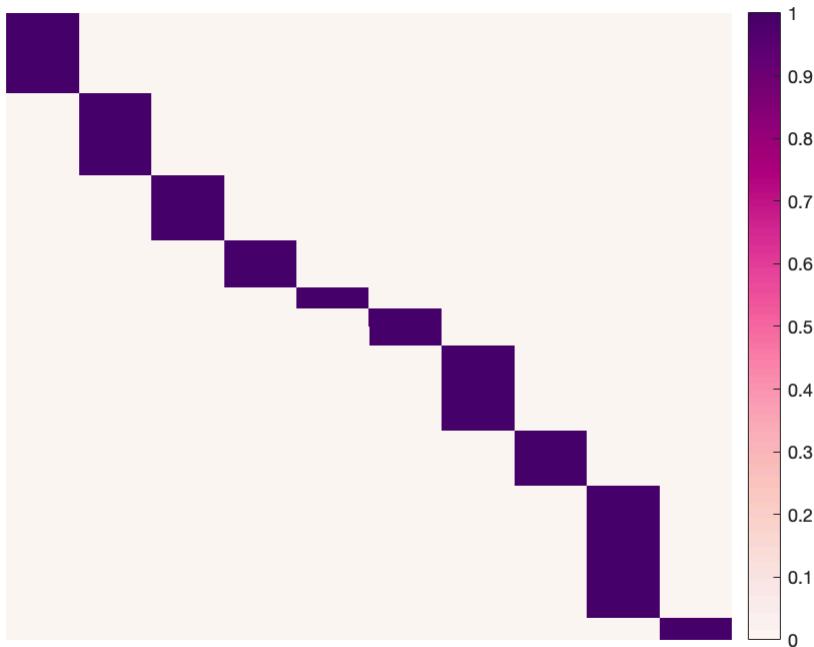
figure('rend','painters','pos',[10 10 500 450])
colormap(brewermap([],cmp))
imagesc(P_rho);
axis off
set(gca,'xtick',[],'ytick',[]);
caxis(c_lim)
%colorbar;
box off
```



```
cmp = 'rdpu';
figure('rend','painters','pos',[10 10 500 400])
colormap(brewermap([],cmp))
imagesc(P_hat);
caxis([0 0.5])
axis off
set(gca,'xtick',[],'ytick',[]);
box off
colorbar;
```



```
figure;
for id_cluster = 1:k
member(:,id_cluster) = (class_order == id_cluster)';
end
colormap(brewermap([],cmp))
imagesc(member);
caxis([0 1])
colorbar;
axis off
set(gca,'xtick',[],'ytick',[]);
box off
```



```
figure;
colormap(brewermap([],cmp))
imagesc(rho_class);
caxis([0 1])
colorbar;
axis off
set(gca,'xtick',[],'ytick',[]);
box off
```

