

semmcci: Internal Tests

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Tests

```
#> test-semmcci-mc-latent-med-defined-none
#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-latent-med-defined

#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-latent-med-std-defined-none

#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-latent-med-std-defined

#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-moment

#> Test passed

#> test-semmcci-mc-simple-med-defined-equality

#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-simple-med-defined-inequality

#> Test passed
#> Test passed
#> Test passed
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#> test-semmcci-mc-simple-med-defined-none-mi-adj
#> Test passed

#> test-semmcci-mc-simple-med-defined-none-mi
#> Test passed
#> Test passed

#> test-semmcci-mc-simple-med-defined-none
#> Test passed
#> Test passed
#> Test passed
#> Monte Carlo Confidence Intervals
#>      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> cp  -0.0199 0.0335 2000 -0.1190 -0.1016 -0.0840 0.0464 0.0680 0.0835
#> b    0.0817 0.0327 2000 -0.0241 0.0006 0.0187 0.1454 0.1642 0.1851
#> a    0.1098 0.0306 2000 0.0136 0.0324 0.0479 0.1700 0.1858 0.1945
#> y~~y 1.0476 0.0457 2000 0.9057 0.9280 0.9594 1.1362 1.1609 1.1954
#> m~~m 0.9615 0.0429 2000 0.8392 0.8537 0.8798 1.0462 1.0734 1.0977
#> x~~x 1.0040 0.0459 2000 0.8560 0.8773 0.9059 1.0906 1.1130 1.1284
#> y~1 -0.0038 0.0316 2000 -0.1053 -0.0809 -0.0637 0.0591 0.0758 0.1087
#> m~1 -0.0050 0.0314 2000 -0.1032 -0.0824 -0.0668 0.0574 0.0749 0.0964
#> x~1 -0.0258 0.0318 2000 -0.1313 -0.1138 -0.0904 0.0338 0.0552 0.0672
#> Standardized Monte Carlo Confidence Intervals
#>      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> cp  -0.0194 0.0327 2000 -0.1173 -0.0995 -0.0807 0.0452 0.0649 0.0794
#> b    0.0785 0.0313 2000 -0.0235 0.0006 0.0176 0.1395 0.1552 0.1781
#> a    0.1115 0.0310 2000 0.0142 0.0331 0.0497 0.1717 0.1893 0.2009
#> y~~y 0.9938 0.0052 2000 0.9684 0.9741 0.9792 0.9992 0.9997 1.0000
#> m~~m 0.9876 0.0070 2000 0.9596 0.9642 0.9705 0.9975 0.9989 0.9998
#> x~~x 1.0000 0.0000 2000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000

#> test-semmcci-mc-simple-med-defined
#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-simple-med-std-defined-none-random-x
#> Test passed
#> Test passed
#> Test passed

#> test-semmcci-mc-simple-med-std-defined-none
#> Test passed
#> Test passed
#> Test passed

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#> test-semccci-mc-simple-med-std-defined

#> Test passed
#> Test passed
#> Test passed

#> test-semccci-mc-methods

#> Monte Carlo Confidence Intervals
#>
      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> visual=~x2      0.5535 0.1024 100 0.3311 0.3320 0.3780 0.7535 0.8754 0.9487
#> visual=~x3      0.7294 0.1166 100 0.4372 0.4416 0.5287 0.9483 1.0248 1.0268
#> textual=~x5      1.1131 0.0726 100 0.9614 0.9665 0.9844 1.2562 1.2917 1.2962
#> textual=~x6      0.9261 0.0567 100 0.7828 0.7932 0.8191 1.0312 1.0571 1.0792
#> speed=~x8        1.1800 0.1743 100 0.8005 0.8029 0.8599 1.5743 1.6834 1.6898
#> speed=~x9        1.0815 0.1555 100 0.6970 0.7065 0.7811 1.3953 1.4236 1.4257
#> x1~~x1           0.5491 0.1107 100 0.3075 0.3194 0.3528 0.7711 0.8789 0.9454
#> x2~~x2           1.1338 0.1031 100 0.8013 0.8547 0.9423 1.3276 1.3713 1.3780
#> x3~~x3           0.8443 0.0914 100 0.6108 0.6251 0.6868 1.0188 1.0686 1.0848
#> x4~~x4           0.3712 0.0422 100 0.2677 0.2693 0.2833 0.4490 0.4557 0.4592
#> x5~~x5           0.4463 0.0630 100 0.3097 0.3105 0.3212 0.5619 0.5834 0.5882
#> x6~~x6           0.3562 0.0402 100 0.2718 0.2775 0.2863 0.4338 0.4530 0.4628
#> x7~~x7           0.7994 0.0885 100 0.5764 0.5807 0.6327 0.9954 1.0567 1.0945
#> x8~~x8           0.4877 0.0784 100 0.3373 0.3471 0.3619 0.6578 0.7555 0.7586
#> x9~~x9           0.5661 0.0674 100 0.3887 0.4051 0.4386 0.7149 0.7339 0.7349
#> visual~~visual   0.8093 0.1521 100 0.3440 0.3488 0.4997 1.0869 1.1897 1.2620
#> textual~~textual 0.9795 0.0974 100 0.7003 0.7260 0.7806 1.1443 1.1679 1.1728
#> speed~~speed     0.3837 0.0916 100 0.1350 0.1557 0.1909 0.5344 0.5855 0.6174
#> visual~~textual  0.4082 0.0736 100 0.2389 0.2432 0.2658 0.5373 0.5650 0.5667
#> visual~~speed    0.2622 0.0522 100 0.1266 0.1319 0.1494 0.3568 0.3836 0.3859
#> textual~~speed   0.1735 0.0429 100 0.0630 0.0662 0.0855 0.2484 0.2707 0.2715
#> Standardized Monte Carlo Confidence Intervals
#>
      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> visual=~x2      0.4236 0.0566 100 0.2393 0.2636 0.3076 0.5183 0.5310 0.5377
#> visual=~x3      0.5811 0.0550 100 0.4049 0.4165 0.4603 0.6707 0.6872 0.6877
#> textual=~x5      0.8551 0.0238 100 0.8069 0.8085 0.8118 0.8997 0.9100 0.9176
#> textual=~x6      0.8380 0.0218 100 0.7686 0.7757 0.7911 0.8677 0.8774 0.8816
#> speed=~x8        0.7230 0.0534 100 0.5473 0.5587 0.5959 0.8006 0.8130 0.8153
#> speed=~x9        0.6650 0.0523 100 0.5348 0.5391 0.5445 0.7441 0.7947 0.8069
#> x1~~x1           0.4042 0.0885 100 0.2339 0.2354 0.2476 0.6054 0.7033 0.7318
#> x2~~x2           0.8206 0.0463 100 0.7109 0.7179 0.7313 0.9053 0.9298 0.9426
#> x3~~x3           0.6623 0.0621 100 0.5270 0.5278 0.5501 0.7881 0.8264 0.8360
#> x4~~x4           0.2748 0.0318 100 0.1989 0.2042 0.2244 0.3372 0.3452 0.3462
#> x5~~x5           0.2689 0.0408 100 0.1580 0.1719 0.1906 0.3409 0.3464 0.3489
#> x6~~x6           0.2977 0.0362 100 0.2227 0.2302 0.2471 0.3742 0.3983 0.4093
#> x7~~x7           0.6757 0.0679 100 0.5180 0.5357 0.5660 0.8225 0.8557 0.8809
#> x8~~x8           0.4772 0.0748 100 0.3353 0.3390 0.3591 0.6447 0.6877 0.7005
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#> x9~~x9          0.5578 0.0686 100 0.3489 0.3683 0.4463 0.7035 0.7094 0.7140
#> visual~~visual  1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> textual~~textual 1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> speed~~speed    1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> visual~~textual  0.4585 0.0681 100 0.3053 0.3120 0.3220 0.5821 0.5921 0.5923
#> visual~~speed    0.4705 0.0767 100 0.2326 0.2692 0.3453 0.6425 0.6988 0.7384
#> textual~~speed   0.2830 0.0661 100 0.1138 0.1183 0.1619 0.4095 0.4576 0.4857
#> Monte Carlo Confidence Intervals
#> Standardized Monte Carlo Confidence Intervals

#> test-semmcci-npd

#> Test passed
#> Test passed
#> Test passed
#> Test passed
#> [[1]]
#> [[1]][[1]]
#> [[1]][[1]]$value
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#>
#>
#> [[1]][[1]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[2]]
#> [[1]][[2]]$value
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#>
#> [[1]][[2]]$visible
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#>
#> [[1]][[3]]$visible
#> [1] TRUE
#>
#>

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#> [[1]][[4]]
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#>
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#> [1] TRUE
#>
#>
#> [[1]][[5]]
#> [[1]][[5]]$value
#> [[1]][[5]]$value[[1]]
#> Monte Carlo Confidence Intervals
#>
#>               est      se      R      0.05%      0.5%      2.5%
#> ses=~sei          5.2195  0.4246 20000   3.9029   4.1194   4.3966
#> alien67=~powerless67  0.9787  0.0615 20000   0.7845   0.8185   0.8571
#> alien71=~powerless71  0.9221  0.0593 20000   0.7286   0.7707   0.8077
#> alien71~alien67      0.6070  0.0511 20000   0.4388   0.4734   0.5052
#> alien71~ses        -0.2268  0.0526 20000  -0.4004  -0.3615  -0.3298
#> alien67~ses        -0.5750  0.0567 20000  -0.7669  -0.7195  -0.6864
#> anomia67~~anomia71    1.6229  0.3137 20000   0.5801   0.8048   1.0084
#> powerless67~~powerless71  0.3387  0.2590 20000  -0.5218  -0.3237  -0.1608
#> education~~education  2.8013  0.5091 20000   1.1111   1.5043   1.8083
#> sei~~sei          264.5971 18.3849 20000 205.9679 217.5911 228.4306
#> anomia67~~anomia67    4.7307  0.4547 20000   3.2789   3.5367   3.8248
#> powerless67~~powerless67  2.5634  0.4013 20000   1.2356   1.5588   1.7968
#> anomia71~~anomia71    4.3992  0.5126 20000   2.7532   3.0835   3.3867
#> powerless71~~powerless71  3.0699  0.4341 20000   1.6289   1.9517   2.2171
#> ses~~ses           6.7983  0.6524 20000   4.6766   5.0958   5.5077
#> alien67~~alien67      4.8415  0.4684 20000   3.3309   3.6184   3.9293
#> alien71~~alien71      4.0832  0.4045 20000   2.7050   3.0341   3.2793
#>
#>          97.5%      99.5%      99.95%
#> ses=~sei          6.0553  6.3070  6.6330
#> alien67=~powerless67  1.0973  1.1363  1.1797
#> alien71=~powerless71  1.0386  1.0767  1.1216
#> alien71~alien67      0.7063  0.7383  0.7748
#> alien71~ses        -0.1245 -0.0917 -0.0519
#> alien67~ses        -0.4639 -0.4315 -0.3935
#> anomia67~~anomia71    2.2310  2.4129  2.7122
#> powerless67~~powerless71  0.8561  1.0182  1.1799
#> education~~education  3.7948  4.1182  4.4748
#> sei~~sei          300.5895 311.8786 326.8796
#> anomia67~~anomia67    5.6065  5.8930  6.2130
#> powerless67~~powerless67  3.3667  3.6265  3.8713

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#> anomia71~~nomia71      5.4070  5.7381  6.0544
#> powerless71~~powerless71 3.9169  4.1760  4.4608
#> ses~~ses               8.0738  8.4923  8.9538
#> alien67~~alien67       5.7617  6.0520  6.3860
#> alien71~~alien71       4.8562  5.0892  5.3794
#>
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#>
#> [[1]][[7]]$visible
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#>
#>
#> [[1]][[8]]
#> [[1]][[8]]$value
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#>
#> [[1]][[8]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[9]]
#> [[1]][[9]]$value
#> [[1]][[9]]$value[[1]]
#> [1] TRUE
#>

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#>
#> [[1]][[9]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[10]]
#> [[1]][[10]]$value
#> [[1]][[10]]$value[[1]]
#>      est      se    R   0.05%    0.5%    2.5%  97.5%  99.5% 99.95%
#> cp  -0.0194 0.0327 2000 -0.1173 -0.0995 -0.0807 0.0452 0.0649 0.0794
#> b    0.0785 0.0313 2000 -0.0235 0.0006 0.0176 0.1395 0.1552 0.1781
#> a    0.1115 0.0310 2000 0.0142 0.0331 0.0497 0.1717 0.1893 0.2009
#> y~~y 0.9938 0.0052 2000 0.9684 0.9741 0.9792 0.9992 0.9997 1.0000
#> m~~m 0.9876 0.0070 2000 0.9596 0.9642 0.9705 0.9975 0.9989 0.9998
#> x~~x 1.0000 0.0000 2000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#>
#>
#> [[1]][[10]]$visible
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#>
#>
#> [[1]][[11]]
#> [[1]][[11]]$value
#> [[1]][[11]]$value[[1]]
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#>
#>
#> [[1]][[11]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[12]]
#> [[1]][[12]]$value
#> [[1]][[12]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[12]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[13]]
#> [[1]][[13]]$value
#> [[1]][[13]]$value[[1]]
#> [1] TRUE
#>

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#> [[1]][[16]]
#> [[1]][[16]]$value
#> [[1]][[16]]$value[[1]]
#> [[1]][[16]]$value[[1]]$thetahatstar
#>          y1          y2          y3
#> [1,] 0.3667960176 1.4102107562 1.239995e+00
#> [2,] 0.4654300832 0.6345097070 9.325081e-01
#> [3,] -0.1656368634 0.1087359355 -1.462019e-01
#> [4,] -0.9269696690 -1.3164506347 -1.886487e+00
#> [5,] 0.4764778438 1.1272178455 1.219717e+00
#> [6,] -0.6074411666 -2.4192878272 -2.100070e+00
#> [7,] 0.2270490039 0.2626187454 4.288679e-01
#> [8,] 0.3424125240 0.3655583505 6.298510e-01
#> [9,] 0.7325857562 2.1653879175 2.115219e+00
#> [10,] -1.7445019790 -2.8478331086 -3.755787e+00
#> [11,] 1.0783850952 1.4999701322 2.177145e+00
#> [12,] 0.2171451569 1.1153299715 8.897370e-01
#> [13,] 0.1453786364 -0.5088997020 -1.011338e-01
#> [14,] 0.8133831615 1.8068527233 2.017000e+00
#> [15,] 0.4441783737 -0.0343869757 5.347980e-01
#> [16,] 0.5170249374 2.2729680408 1.906122e+00
#> [17,] -2.2404828821 -4.3775642898 -5.223201e+00
#> [18,] 1.4221645325 2.6277014205 3.231674e+00
#> [19,] -1.2615616797 -0.4614074617 -1.829204e+00
#> [20,] 0.5233570638 1.2503660732 1.346516e+00
#> [21,] 1.9420025444 3.5559268482 4.395028e+00
#> [22,] -1.2303097235 -2.5374981013 -2.942376e+00
#> [23,] -1.4137599603 -1.6416033808 -2.673951e+00
#> [24,] 0.3967838817 0.6309573088 8.449363e-01
#> [25,] 0.9173556510 2.0693630236 2.292334e+00
#> [26,] 1.7053331738 3.1730259757 3.887412e+00
#> [27,] -1.6908477829 -2.5072259899 -3.499858e+00
#> [28,] 0.3359257796 0.1943452947 5.267461e-01
#> [29,] -1.2104789354 -1.8518209043 -2.537126e+00
#> [30,] -1.2390388568 -1.9807523204 -2.644291e+00
#> [31,] 0.7515866115 1.5684811403 1.807655e+00
#> [32,] 0.2188894300 0.3531348931 4.689257e-01
#> [33,] 0.3271495639 1.3329034887 1.147654e+00
#> [34,] -0.1329994816 0.5924712429 1.629491e-01
#> [35,] 1.4494239155 2.0586846697 2.949886e+00
#> [36,] 0.3769848017 1.0264790514 1.039745e+00
#> [37,] -3.9915032708 -6.8164803202 -8.760184e+00
#> [38,] -0.7574290997 -2.2002006376 -2.165518e+00
#> [39,] 0.7423631596 0.5937596116 1.255223e+00
#> [40,] 0.1430329714 0.0746179799 2.197691e-01

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#> [41,] -0.2954146821  0.0466343108 -3.424960e-01
#> [42,]  0.2340939768 -0.7550826012 -1.271288e-01
#> [43,]  0.5149945173  1.7204975090  1.596992e+00
#> [44,]  0.0561077413 -0.8631125324 -4.090261e-01
#> [45,] -1.9285546451 -2.8174755859 -3.968449e+00
#> [46,]  0.0084227460  0.2859147275  1.691737e-01
#> [47,] -0.5723736546 -1.0384231365 -1.290020e+00
#> [48,]  0.8244548217  0.7499162282  1.444250e+00
#> [49,] -0.8106735514 -1.2265005904 -1.691550e+00
#> [50,]  1.3924984149  2.3107822102  3.018805e+00
#> [51,] -0.1787803986 -1.4323115834 -1.017808e+00
#> [52,]  0.7927983351  0.7056500690  1.380210e+00
#> [53,]  3.0777830453  5.8491919752  7.083989e+00
#> [54,] -0.9485081317 -1.4157554810 -1.968455e+00
#> [55,] -0.3522976343 -1.6538048646 -1.357100e+00
#> [56,]  0.4644415259  1.3228060047  1.313251e+00
#> [57,] -0.1623916088 -1.3239584778 -9.372405e-01
#> [58,] -0.2909057039  0.0111912074 -3.565428e-01
#> [59,]  0.8953879210  3.0326779155  2.799540e+00
#> [60,]  1.3419172646  1.6003596389  2.561476e+00
#> [61,] -0.1562643659 -0.3574317971 -3.932182e-01
#> [62,] -0.3481709521 -0.8475985130 -9.045438e-01
#> [63,] -0.2392304624 -1.1519766280 -9.376143e-01
#> [64,]  0.1821522641  0.0605734673  2.607559e-01
#> [65,]  0.8777025183  1.8539246368  2.123328e+00
#> [66,]  0.8264312445  0.5294251374  1.324352e+00
#> [67,]  0.8802863322  0.9211779112  1.608914e+00
#> [68,]  0.6479742403  1.7021561168  1.752636e+00
#> [69,]  0.3274523478  1.4320998897  1.203082e+00
#> [70,]  0.5500493782  1.2615701632  1.386019e+00
#> [71,] -1.2838665559 -1.7610950247 -2.578289e+00
#> [72,] -0.4174476828 -2.1172122678 -1.695513e+00
#> [73,] -0.0517494737 -0.5612423967 -3.759966e-01
#> [74,] -1.3817345619 -1.7796312007 -2.710616e+00
#> [75,]  2.5142307367  4.4702046417  5.615971e+00
#> [76,]  0.7439222846  0.2606380536  1.072299e+00
#> [77,]  1.2743393271  1.8546718405  2.618340e+00
#> [78,]  0.4655909850  1.1609195395  1.224844e+00
#> [79,] -1.0303944337 -2.1551067876 -2.480875e+00
#> [80,] -1.0712334647 -1.1793858079 -1.990316e+00
#> [81,] -0.7780081733 -1.1460773249 -1.606185e+00
#> [82,]  1.3636069807  2.7180794696  3.208810e+00
#> [83,]  0.0879676294  0.2739676824  2.617344e-01
#> [84,]  0.2319160541  1.6711366806  1.216605e+00
#> [85,] -0.0278731270  1.1164033134  5.847999e-01

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#> [86,] 0.7397100706 1.4787097963 1.743025e+00
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#> [88,] -0.7638187526 -1.7002299536 -1.896023e+00
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#> [90,] -1.2544612655 -2.0932423915 -2.725949e+00
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#> [92,] 0.3579381798 -0.1696649821 3.521846e-01
#> [93,] -0.3935190521 -0.1789600042 -5.900255e-01
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#> [119,] -1.4083032733 -1.7147667791 -2.707749e+00
#> [120,] -0.4905566270 -0.7317147176 -1.017785e+00
#> [121,] -1.0937242210 -2.5502992299 -2.779161e+00
#> [122,] -1.8858892584 -3.2023147165 -4.128816e+00
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#> [126,] 0.7718294437 0.0708351441 1.001766e+00
#> [127,] -0.3915358563 0.5285293234 -1.949256e-01
#> [128,] 1.8802600794 2.5063927925 3.735589e+00
#> [129,] 0.4315300323 2.4188729423 1.880482e+00
#> [130,] -0.7903067145 -1.4220331793 -1.774665e+00

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#> [311,] -1.0151104938 -2.4067336985 -2.601459e+00
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#> [351,] -0.6261410520 -0.4752451122 -1.044526e+00
#> [352,] -1.2043985576 -2.7718874084 -3.040142e+00
#> [353,] 0.0933195302 -1.3628266960 -6.399442e-01
#> [354,] 0.1411863780 0.9919222523 7.265319e-01
#> [355,] 0.5418339661 0.7345850233 1.083320e+00

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#> [356,] -1.6220992660 -1.2590250245 -2.721431e+00
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#> [360,] 1.6340505618 1.7297355416 2.997559e+00
#> [361,] -0.3902149384 -0.3810681180 -6.980669e-01
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#> [363,] -2.1575217179 -2.6319897200 -4.151030e+00
#> [364,] 2.1726559746 3.2291802060 4.501318e+00
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#> [366,] -0.0212697928 0.9431318816 4.968757e-01
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#> [369,] -0.4579268845 -0.6494050960 -9.314181e-01
#> [370,] 1.6644438302 3.1543056379 3.826035e+00
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#> [390,] -1.1691337513 -2.4567889495 -2.821301e+00
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#> [398,] -1.1732930995 -2.3799612734 -2.783851e+00
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#> [406,] 0.5990642690 -1.2289560975 6.500174e-02
#> [407,] -0.3542174194 -0.1533880088 -5.268258e-01
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#> [619,] -0.6242202873 -1.1406327104 -1.411393e+00
#> [620,] -0.6940454076 -1.7580014405 -1.841078e+00
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#> [622,] -1.4579127183 -2.7099596951 -3.321902e+00
#> [623,] 0.2967135408 -0.3288712350 1.874860e-01
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#> [625,] -1.3282750595 -2.2247472621 -2.890973e+00

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#> [628,] -0.2002383722 0.4086190896 -2.292668e-02
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#> [716,] 0.5227598465 1.0640198844 1.242357e+00
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#> [806,] 0.8835234159 1.6387017167 2.011147e+00
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#> [851,] 1.0082309721 0.9037597756 1.758792e+00
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#> [889,] -0.6748413745 -0.2668511743 -9.896047e-01
#> [890,] -0.1011259913 -0.6417647652 -4.822546e-01
#> [891,] 0.0619650805 0.9595159305 6.097604e-01
#> [892,] 0.0578387623 0.5482992907 3.764069e-01
#> [893,] 2.7590048440 3.9238909403 5.618018e+00
#> [894,] 1.3861434732 2.5910433676 3.166413e+00
#> [895,] -1.5006463820 -1.9717432934 -2.965510e+00

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#> [896,] -0.7249888678 -1.8533465637 -1.932576e+00
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#> [898,] -1.0120941305 -1.8930259470 -2.312611e+00
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#> [900,] -0.1486187724 -1.4664521776 -9.991441e-01
#> [901,] 0.1160043314 -0.9979371058 -4.091583e-01
#> [902,] -0.3130612766 -0.1278273891 -4.613199e-01
#> [903,] 1.2149498441 1.7306229639 2.475441e+00
#> [904,] 2.0013672032 3.2180616555 4.281554e+00
#> [905,] 0.4273395193 -0.9930291708 -1.820595e-02
#> [906,] -0.0698976718 0.3175376112 8.905911e-02
#> [907,] -0.2967598557 -0.8216205526 -8.260185e-01
#> [908,] -0.0447394958 -0.1971305551 -1.651884e-01
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#> [924,] 0.1584235753 0.8265523458 6.562529e-01
#> [925,] -0.2195892094 -1.0435170472 -8.529315e-01
#> [926,] 0.4300847305 1.3004913605 1.258025e+00
#> [927,] -0.2454065479 -1.0251087374 -8.749094e-01
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#> [933,] -1.5440187093 -1.9942285496 -3.032073e+00
#> [934,] -0.5121801960 -1.0776846506 -1.236748e+00
#> [935,] 0.0354104851 1.4179796347 8.310755e-01
#> [936,] -0.0947303012 0.9537972002 4.111908e-01
#> [937,] 0.1267550443 -0.8215163581 -2.978462e-01
#> [938,] -0.2747728397 -0.6000884672 -6.756601e-01
#> [939,] -0.4344088617 0.2471215873 -4.045569e-01
#> [940,] -0.6083796897 -0.9801353705 -1.302571e+00

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#> [941,] -1.8756335253 -3.1761380338 -4.101500e+00
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#> [944,]  0.1876993030  0.6495189762  5.945130e-01
#> [945,]  1.5771158150  3.0385937129  3.652924e+00
#> [946,] -0.8997642321 -2.1422267701 -2.310834e+00
#> [947,] -1.2927080650 -2.1371701542 -2.798021e+00
#> [948,] -0.2648552294 -0.6429603614 -6.870852e-01
#> [949,]  0.9017475688  1.7187748629  2.078309e+00
#> [950,] -1.6793845603 -3.3446776741 -3.950314e+00
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#> [953,]  0.2315395226  1.0592896677  8.765865e-01
#> [954,]  0.7311739287  2.3973217697  2.242172e+00
#> [955,]  0.3287646913  0.2473163945  5.472131e-01
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#> [986,] -1.0954064600 -1.7689695574 -2.347654e+00
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#> [1031,] -0.4957467700 -3.0692286540 -2.321480e+00
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#> [1037,]  0.9836942576  1.8171774301  2.235104e+00
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#> [1040,]  0.7277252235  1.5758247237  1.781975e+00
#> [1041,]  0.8771552371  0.8970866641  1.591640e+00
#> [1042,]  1.4632925347  2.1322487161  3.008005e+00
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#> [1044,]  0.3069519810  0.4743192636  6.459902e-01
#> [1045,]  0.2257807656  0.6678409241  6.521678e-01
#> [1046,] -0.5427944802  0.0698522330 -6.380886e-01
#> [1047,] -1.4037732746 -1.3710466808 -2.511350e+00
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#> [1049,] -0.5248646293 -1.3614237105 -1.410029e+00
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#> [1062,] -1.3253621303 -2.7654839749 -3.187427e+00
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#> [1073,]  1.6171177264  1.7590321387  2.992702e+00
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#> [1075,] -0.6631348710  0.1334920771 -7.528331e-01

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#> [1076,] 0.9369227919 2.9188431959 2.788159e+00
#> [1077,] 0.2977754412 -0.0023353981 3.700239e-01
#> [1078,] 0.1641353594 0.1423009638 2.836445e-01
#> [1079,] -0.9300791602 -0.9383116177 -1.680513e+00
#> [1080,] -0.1014489444 -0.5892296323 -4.535025e-01
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#> [1082,] 0.8860266558 3.0270114036 2.784722e+00
#> [1083,] 0.3469589994 1.2492227739 1.125917e+00
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#> [1093,] -0.7104360084 -1.4049900324 -1.665610e+00
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#> [1095,] 0.8785223498 1.1941186124 1.758185e+00
#> [1096,] 0.1044965652 1.2846249900 8.432182e-01
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#> [1101,] -0.8752535905 -2.1436779136 -2.281075e+00
#> [1102,] 0.6384527792 1.4678669712 1.610742e+00
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#> [1104,] -1.8658461996 -3.7826929303 -4.425908e+00
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#> [1106,] -1.6204804705 -1.9107547904 -3.081095e+00
#> [1107,] -0.7168388614 -2.1999618140 -2.114770e+00
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#> [1116,] 0.3612637189 0.8907262781 9.448043e-01
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#> [1121,] -0.1535224950 -0.2858096594 -3.500518e-01
#> [1122,]  0.2345956302  0.0588796070  3.252117e-01
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#> [1126,] -0.6993428345  0.0538595735 -8.421764e-01
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#> [1128,]  0.6760861487  2.7290985032  2.357601e+00
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#> [1144,] -0.9902774538 -2.2585386696 -2.488250e+00
#> [1145,] -0.3531275021  1.3746977681  3.225569e-01
#> [1146,]  2.1706345539  4.9838415163  5.472560e+00
#> [1147,]  0.6835247599  0.8961274643  1.349655e+00
#> [1148,]  2.4906363762  4.5228010955  5.615738e+00
#> [1149,] -0.3169445587 -1.1587659449 -1.038290e+00
#> [1150,] -0.3785746806  1.0267424814  9.772418e-02
#> [1151,]  1.0863236251  1.8576161816  2.385523e+00
#> [1152,] -1.2554948651 -2.8103271370 -3.125190e+00
#> [1153,]  1.1211961772  2.2499307352  2.646726e+00
#> [1154,]  1.6351155931  3.2587463758  3.847424e+00
#> [1155,] -0.2041459383 -0.2886784704 -4.147703e-01
#> [1156,] -2.6748846323 -4.2960377735 -5.719648e+00
#> [1157,] -2.5301264400 -4.9125120883 -5.881255e+00
#> [1158,]  1.1482335308  0.4956725413  1.706901e+00
#> [1159,] -0.1873506875 -0.7042303442 -6.244408e-01
#> [1160,] -0.1566006007 -0.0732706423 -2.359399e-01
#> [1161,]  1.1109575827  3.5158477760  3.336490e+00
#> [1162,]  0.0743801095  1.1318741613  7.208932e-01
#> [1163,] -1.3367575616 -1.4715082954 -2.483535e+00
#> [1164,]  0.2730123017  0.0402143125  3.627580e-01
#> [1165,] -0.3112230273 -1.1763595447 -1.040919e+00

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#> [1166,] 2.2401532951 4.2076809226 5.128512e+00
#> [1167,] -0.7488009764 -1.7398411599 -1.899279e+00
#> [1168,] -0.4278050076 -0.9837555444 -1.079407e+00
#> [1169,] -0.3414988067 -1.2664415287 -1.128664e+00
#> [1170,] -1.4672632899 -2.8229153570 -3.396247e+00
#> [1171,] -0.9777541676 -1.0880575877 -1.823066e+00
#> [1172,] 0.5584536622 1.2622248916 1.396862e+00
#> [1173,] 0.7836634634 1.9642726911 2.067301e+00
#> [1174,] 0.6035742045 1.0838478586 1.354135e+00
#> [1175,] -0.3355699766 -0.5732697870 -7.365896e-01
#> [1176,] -0.2756917170 -0.5626540680 -6.560314e-01
#> [1177,] 0.9847420045 2.3125699563 2.511333e+00
#> [1178,] -0.3581370925 0.2643274012 -2.998990e-01
#> [1179,] -1.3526114329 -2.2974259023 -2.961654e+00
#> [1180,] 1.8904959247 3.6843604054 4.402076e+00
#> [1181,] 1.2815219432 2.5962446821 3.038839e+00
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#> [1183,] -1.0896674004 -1.5839053479 -2.237794e+00
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#> [1188,] 0.3163851790 -0.0311428230 3.772429e-01
#> [1189,] 0.9210612943 -0.2187521829 1.027146e+00
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#> [1191,] 2.3016248644 4.7915704529 5.529200e+00
#> [1192,] -0.8887408552 -1.9861776986 -2.210487e+00
#> [1193,] -0.5173139698 -1.2474257756 -1.337349e+00
#> [1194,] 1.1822917096 2.9504374916 3.111663e+00
#> [1195,] 0.3619155650 0.6319835000 8.020257e-01
#> [1196,] -0.8015721240 -1.5583870165 -1.864384e+00
#> [1197,] 0.4148105187 2.1987896407 1.737496e+00
#> [1198,] -1.3948469663 -2.5989421487 -3.181650e+00
#> [1199,] 0.9020987756 2.6253546415 2.581861e+00
#> [1200,] -0.2009332591 -0.4075109137 -4.767112e-01
#> [1201,] -0.6813136010 -1.1938722920 -1.512133e+00
#> [1202,] 2.6519686427 4.6065262720 5.863380e+00
#> [1203,] 0.9270301281 1.0786287261 1.754581e+00
#> [1204,] -1.2614716343 -0.6670970988 -1.943240e+00
#> [1205,] -0.8036896798 -0.6862074028 -1.383001e+00
#> [1206,] -0.6394269298 -1.2457613723 -1.488698e+00
#> [1207,] 0.3287288004 -0.0547438500 3.795376e-01
#> [1208,] -1.3765174641 -2.9814548358 -3.371072e+00
#> [1209,] -1.4394609920 -2.3614854981 -3.105504e+00
#> [1210,] -1.0949214113 -2.1438222379 -2.555076e+00

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#> [1211,] 0.7374387193 1.0280093954 1.490073e+00
#> [1212,] 0.7400262062 0.9721350761 1.462292e+00
#> [1213,] -0.8393179588 -1.7130593080 -1.997289e+00
#> [1214,] -1.9674835952 -3.6783409465 -4.494737e+00
#> [1215,] 0.0470242873 0.5140626552 3.439216e-01
#> [1216,] 1.1058048902 1.2468649631 2.070874e+00
#> [1217,] -0.6069052818 0.4063070071 -5.313151e-01
#> [1218,] 1.9947262084 3.7586380661 4.573270e+00
#> [1219,] 0.0545175581 -0.3670926427 -1.357388e-01
#> [1220,] -1.2749697923 -1.3130335529 -2.318540e+00
#> [1221,] 0.5434022424 1.0793607564 1.276612e+00
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#> [1223,] 0.2684523061 0.1626044979 4.249932e-01
#> [1224,] 1.1915195514 0.7205587135 1.885680e+00
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#> [1228,] 1.3455631218 2.6474189174 3.147096e+00
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#> [1230,] 0.5194357052 1.2692449729 1.352104e+00
#> [1231,] -0.8869529918 -1.9097250330 -2.165830e+00
#> [1232,] 1.4882120863 2.3291886843 3.148372e+00
#> [1233,] 0.5198790210 0.6820338198 1.026779e+00
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#> [1255,] 1.4382346035 2.4675539544 3.162838e+00

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#> [1256,] -0.5640514521 -1.2025997577 -1.370753e+00
#> [1257,] -0.7792172612 -0.1279163246 -1.042656e+00
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#> [1261,] -0.6244949588 -0.5192355236 -1.066886e+00
#> [1262,] 0.6413441995 0.1028690430 8.568311e-01
#> [1263,] -1.3414644760 -1.6301832604 -2.577462e+00
#> [1264,] 2.2605399244 4.8902031576 5.532705e+00
#> [1265,] 0.7510983590 1.5760943377 1.811271e+00
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#> [1267,] -1.5459563214 -2.9534551915 -3.566820e+00
#> [1268,] 0.9876055932 1.5192553398 2.074647e+00
#> [1269,] 2.2897806664 4.8574163124 5.550972e+00
#> [1270,] 1.9623164913 2.0731296538 3.597469e+00
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#> [1273,] -0.9315623635 -2.2211402291 -2.394279e+00
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#> [1287,] 0.0881938028 1.5059514067 9.457159e-01
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#> [1297,] 0.0741953859 0.6788820083 4.692712e-01
#> [1298,] -0.9132072888 -1.7325539013 -2.100246e+00
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#> [1300,] -1.3785572977 -2.7671037584 -3.254660e+00

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#> [1301,] -0.3538247196 -0.7274598072 -8.449219e-01
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#> [1303,]  0.4381691833  0.2203183823  6.686555e-01
#> [1304,]  1.7882936450  3.5228888039  4.185021e+00
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#> [1309,] -2.0589495856 -3.4409945326 -4.477076e+00
#> [1310,] -0.8777274070 -0.9633199015 -1.629110e+00
#> [1311,]  0.7189031064  1.4730248720  1.713925e+00
#> [1312,] -1.5091139979 -2.7992385066 -3.435295e+00
#> [1313,] -1.5321631689 -2.2688964930 -3.169719e+00
#> [1314,]  2.3028268550  4.1525813799  5.176087e+00
#> [1315,] -0.7341982248 -2.3636777203 -2.227272e+00
#> [1316,] -0.9120687579 -1.7454234736 -2.105968e+00
#> [1317,] -0.5585616422 -0.4488488148 -9.456073e-01
#> [1318,]  0.6840433670  1.4708686127  1.669259e+00
#> [1319,] -0.4591537735 -0.8680033350 -1.054261e+00
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#> [1321,] -0.5539886958 -0.9698298480 -1.229028e+00
#> [1322,]  0.2689955254 -0.7225426503 -6.554899e-02
#> [1323,]  0.7534333521  2.2603318264  2.193906e+00
#> [1324,] -0.4289206109 -1.4215783711 -1.323772e+00
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#> [1328,] -2.6309955598 -4.3664815815 -5.704012e+00
#> [1329,]  0.7603103584  2.2291625877  2.185183e+00
#> [1330,]  0.5498277037  1.5666474102  1.555048e+00
#> [1331,]  0.3260799956  1.5527865524  1.268347e+00
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#> [1333,] -1.7223953396 -3.0515783925 -3.841290e+00
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#> [1338,] -1.4348424532 -2.5227511438 -3.189241e+00
#> [1339,]  0.5642328399  2.3450295566  2.004980e+00
#> [1340,] -0.6049308809 -1.0474986836 -1.335654e+00
#> [1341,] -0.4403004530 -0.2902660260 -7.101312e-01
#> [1342,] -1.3769208440 -2.6050636807 -3.162693e+00
#> [1343,] -1.0854257302 -1.6018294873 -2.242452e+00
#> [1344,] -1.9950815297 -3.0302255942 -4.169474e+00
#> [1345,] -0.0440749454 -0.3409272139 -2.441609e-01

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#> [1346,] 1.8386929660 3.3570560924 4.155838e+00
#> [1347,] -1.6611301056 -2.2274403770 -3.307532e+00
#> [1348,] 0.4586504689 0.1383886982 6.487277e-01
#> [1349,] -0.0231718989 -0.6457727961 -3.872718e-01
#> [1350,] 0.2313393680 1.1627732050 9.337659e-01
#> [1351,] -1.2723763079 -2.4572511123 -2.950299e+00
#> [1352,] 0.6399316561 1.3561256118 1.550575e+00
#> [1353,] 0.2767452472 0.8830076195 8.351279e-01
#> [1354,] 0.4535111306 1.1284004923 1.191734e+00
#> [1355,] 2.8880400543 5.1732476097 6.472263e+00
#> [1356,] 0.2840059139 0.2321760632 4.829976e-01
#> [1357,] -1.5138076726 -2.0178975481 -3.007536e+00
#> [1358,] 0.4122862552 1.3415098956 1.258594e+00
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#> [1360,] -0.2321975110 1.0853601838 3.127839e-01
#> [1361,] 0.4777150701 0.2034859223 7.086271e-01
#> [1362,] 1.3621027699 2.3785243145 3.018496e+00
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#> [1364,] 1.8037646763 2.9459114845 3.884115e+00
#> [1365,] -0.3319377700 -0.8069458770 -8.617408e-01
#> [1366,] 1.2206133321 1.4594265118 2.332001e+00
#> [1367,] 0.3395783602 1.1955366107 1.086920e+00
#> [1368,] -1.0824991458 -0.7588276498 -1.770972e+00
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#> [1371,] -2.8528837601 -5.2287815549 -6.459243e+00
#> [1372,] -1.4487107554 -1.6792658646 -2.738435e+00
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#> [1374,] 0.9514996287 2.2383063297 2.428667e+00
#> [1375,] -0.8677561391 -1.2184511682 -1.758264e+00
#> [1376,] 0.0293944248 -0.0763096750 -5.694427e-03
#> [1377,] -0.2332446774 -0.6740879223 -6.649419e-01
#> [1378,] 1.0624329871 1.0794439275 1.923878e+00
#> [1379,] 0.8106397957 2.2281301649 2.247370e+00
#> [1380,] 0.8945185012 2.5087036388 2.507672e+00
#> [1381,] 1.2705580551 1.0616860081 2.173551e+00
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#> [1383,] 0.3888720997 -0.1273117762 4.142629e-01
#> [1384,] -0.7763026027 -0.0389015554 -9.896222e-01
#> [1385,] -0.9925040095 -0.5636384801 -1.550428e+00
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#> [1387,] -1.0327223122 -1.4857605478 -2.112319e+00
#> [1388,] -1.1553356185 -2.2620364420 -2.696015e+00
#> [1389,] -1.6831202163 -2.3062638598 -3.378696e+00
#> [1390,] -1.2722695279 -3.6617219619 -3.618597e+00

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#> [1391,] -2.7636134135 -4.0102196440 -5.671674e+00
#> [1392,] -1.4221844986 -2.7740415137 -3.312912e+00
#> [1393,] 0.4742052779 0.2684824432 7.403208e-01
#> [1394,] 0.8772462792 0.8183807221 1.548075e+00
#> [1395,] -1.5783706778 -3.3870028243 -3.847841e+00
#> [1396,] 1.0518025830 0.7149583360 1.708348e+00
#> [1397,] 2.0791850731 4.0565516327 4.843918e+00
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#> [1400,] 0.3050881614 -0.0013080751 3.797128e-01
#> [1401,] 1.7057740522 3.6848999805 4.172031e+00
#> [1402,] 0.9313180614 1.7805861418 2.149485e+00
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#> [1404,] 0.8964510845 2.4480446018 2.476418e+00
#> [1405,] -0.0370746970 0.4786123233 2.193784e-01
#> [1406,] -0.3817791958 -0.6621726035 -8.435489e-01
#> [1407,] 1.1976477199 0.8738476372 1.978391e+00
#> [1408,] 2.1878738370 2.7887755916 4.275888e+00
#> [1409,] -2.5730590128 -4.8621249861 -5.906828e+00
#> [1410,] -1.2715841846 -2.0963967227 -2.749052e+00
#> [1411,] -0.0485206801 -0.5536528280 -3.677584e-01
#> [1412,] 0.3100954720 0.3215430323 5.651256e-01
#> [1413,] -1.0998586117 -1.0178798241 -1.936382e+00
#> [1414,] 0.2660765857 -0.0205637293 3.203801e-01
#> [1415,] 0.3006574249 -0.0606231985 3.412703e-01
#> [1416,] 0.2055024377 0.8853550055 7.475923e-01
#> [1417,] -0.1699795225 -0.2529406207 -3.523325e-01
#> [1418,] 1.7379974544 2.0241894034 3.290588e+00
#> [1419,] -0.1583766101 -0.0245285509 -2.111047e-01
#> [1420,] -0.2164366660 0.6796098857 1.072629e-01
#> [1421,] 2.5632293679 5.2034520403 6.083993e+00
#> [1422,] -0.2699917611 -0.5013220465 -6.148870e-01
#> [1423,] -1.3268083365 -3.0905916500 -3.369652e+00
#> [1424,] -2.9028969935 -5.9808171960 -6.938956e+00
#> [1425,] -1.5710043326 -2.7017379835 -3.458362e+00
#> [1426,] -1.4779553686 -1.8434624775 -2.866025e+00
#> [1427,] -0.5422891260 -0.3023016502 -8.439882e-01
#> [1428,] 0.0701381872 0.5513096493 3.934147e-01
#> [1429,] -0.5941382079 -1.9941653212 -1.847556e+00
#> [1430,] 0.0957573645 -1.0329983581 -4.538634e-01
#> [1431,] -1.7734624958 -3.2967680009 -4.041040e+00
#> [1432,] 1.4150322702 3.0626775618 3.464174e+00
#> [1433,] 1.5183414207 2.9420080949 3.526032e+00
#> [1434,] 1.8227749248 4.2680395435 4.641546e+00
#> [1435,] -1.5686269638 -1.5626393568 -2.823245e+00

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#> [1436,] -0.5402321638 -0.1468588688 -7.551590e-01
#> [1437,]  0.7820415858  1.6566911530  1.894584e+00
#> [1438,]  0.6885451136  0.3594970289  1.058108e+00
#> [1439,] -3.7075031665 -5.6395255572 -7.752881e+00
#> [1440,]  0.6892664717  0.0431528811  8.834493e-01
#> [1441,]  0.2854480219 -0.0069475740  3.520922e-01
#> [1442,]  0.1200662108 -0.0325494271  1.316565e-01
#> [1443,] -1.9393737834 -2.5550391916 -3.836299e+00
#> [1444,] -0.6387910787 -1.1145728690 -1.415101e+00
#> [1445,]  0.0403436418 -1.3337501230 -6.898678e-01
#> [1446,]  0.7045067037  1.5058086114  1.714166e+00
#> [1447,]  1.5390747687  1.6704521967  2.846226e+00
#> [1448,] -1.0399931670 -2.8845618452 -2.897661e+00
#> [1449,]  1.0009230747  1.8752377190  2.288809e+00
#> [1450,]  0.4677970544  1.2259086131  1.263661e+00
#> [1451,] -0.1287210257 -0.3395825510 -3.489666e-01
#> [1452,]  1.1991633979  2.6182806944  2.948368e+00
#> [1453,]  1.2944996941  3.1588240611  3.367230e+00
#> [1454,]  1.3441732569  2.9778192046  3.328722e+00
#> [1455,] -0.0014576921 -0.7123858586 -3.971620e-01
#> [1456,] -0.6672781425 -0.5791017032 -1.153459e+00
#> [1457,] -0.1882921023  0.4117088695 -6.315226e-03
#> [1458,] -0.7964492552 -1.4243384211 -1.783604e+00
#> [1459,]  0.9918003636  2.0428613759  2.370457e+00
#> [1460,] -0.0494061392  0.1827308185  3.979951e-02
#> [1461,]  0.1350377954 -0.8975722544 -3.297256e-01
#> [1462,]  0.8654039993  0.9317959494  1.596249e+00
#> [1463,] -0.1130696601 -1.7332919558 -1.102900e+00
#> [1464,]  1.6772368803  1.7648619257  3.070905e+00
#> [1465,] -0.9102279016 -1.6645075549 -2.058768e+00
#> [1466,] -1.3371929441 -1.4634980227 -2.479632e+00
#> [1467,]  0.3842414663  0.7835325387  9.139690e-01
#> [1468,]  0.0237049989  0.3318956771  2.137479e-01
#> [1469,] -0.2174451342 -0.1100509215 -3.322233e-01
#> [1470,]  0.0082953877  0.2973070195  1.753371e-01
#> [1471,] -0.9899664251 -0.9195521847 -1.744781e+00
#> [1472,]  0.2165273284  1.3669552916  1.028608e+00
#> [1473,]  1.0630053155  1.3777905424  2.090162e+00
#> [1474,] -2.4255157797 -4.1843735245 -5.346721e+00
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#> [1476,]  2.0766034861  3.3357151916  4.440664e+00
#> [1477,]  0.8533756711  2.2383211737  2.306317e+00
#> [1478,] -0.5485019521 -1.4540316417 -1.490897e+00
#> [1479,]  1.3719878845  2.2906561211  2.982059e+00
#> [1480,]  0.4404306573  2.0121448747  1.665864e+00

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#> [1481,] -2.6526003146 -4.0682697469 -5.565458e+00
#> [1482,] -1.7232685559 -2.7608427261 -3.681033e+00
#> [1483,]  0.6597758383  1.0304882273  1.394605e+00
#> [1484,] -0.0004695236  0.3337774146  1.846470e-01
#> [1485,] -2.1247912585 -3.4033514354 -4.538289e+00
#> [1486,] -0.5777653184 -0.7042647517 -1.111299e+00
#> [1487,] -0.1680460997  0.6014365704  1.242221e-01
#> [1488,]  0.5082201160  0.4508670200  8.839524e-01
#> [1489,] -0.9626075749 -0.8700490132 -1.683193e+00
#> [1490,]  0.1218843814  0.5828401111  4.754392e-01
#> [1491,]  0.1033500674 -0.2188307827  7.433504e-03
#> [1492,] -0.9496786758 -0.5133382238 -1.469111e+00
#> [1493,]  0.8070947398  1.2157822023  1.681139e+00
#> [1494,] -0.8410090987 -0.9267670986 -1.563038e+00
#> [1495,]  0.3787258405  1.6339754986  1.379051e+00
#> [1496,] -1.2802189561 -2.7544710992 -3.125023e+00
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#> [1501,]  0.3449413955  0.6802401410  8.076397e-01
#> [1502,] -0.5886241689  0.2033871524 -6.211310e-01
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#> [1504,] -0.1380966563  0.7520847855  2.451719e-01
#> [1505,]  0.1084581630 -0.0882675322  8.626033e-02
#> [1506,]  1.2462739561  1.1097001235  2.169915e+00
#> [1507,]  1.6988806561  3.1342371057  3.857840e+00
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#> [1509,]  0.2864777879 -0.2357801486  2.263838e-01
#> [1510,] -0.4868762415 -0.7030260434 -9.972748e-01
#> [1511,]  2.9060640188  4.1049439747  5.901875e+00
#> [1512,] -0.6965498902 -0.2378361940 -1.000573e+00
#> [1513,]  0.5904983554  1.8318339418  1.752931e+00
#> [1514,] -0.0305051117  0.2533082707  1.025362e-01
#> [1515,] -1.8235783603 -3.0032534039 -3.940645e+00
#> [1516,]  0.3769220113  1.0989413329  1.079880e+00
#> [1517,] -0.4975423332 -0.2018039994 -7.324179e-01
#> [1518,] -0.9288101560 -1.9683139384 -2.250539e+00
#> [1519,]  1.7775699783  1.4134444547  3.000996e+00
#> [1520,] -0.3224963155 -0.2926245831 -5.645407e-01
#> [1521,] -1.0426329987 -3.0159825635 -2.973886e+00
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#> [1525,]  0.7115321858  1.5286695509  1.735614e+00

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#> [1526,] -1.2266054082 -1.9838625815 -2.630513e+00
#> [1527,]  1.1200054009  1.0246132945  1.965241e+00
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#> [1529,]  1.0248452598  2.0930563155  2.439520e+00
#> [1530,] -1.8933759811 -1.4686539069 -3.176043e+00
#> [1531,]  0.1591580576 -0.1116784702  1.364900e-01
#> [1532,]  0.5313976333  0.7172830340  1.060704e+00
#> [1533,] -1.2799931101 -2.2196094177 -2.827916e+00
#> [1534,]  1.8479215453  2.3245730947  3.594361e+00
#> [1535,]  0.0213355579  1.6722555026  9.546368e-01
#> [1536,]  1.3171351307  1.7222195882  2.598200e+00
#> [1537,] -1.4147340864 -1.5673071032 -2.633934e+00
#> [1538,]  0.3640463946  1.0489875712  1.036103e+00
#> [1539,]  0.3461757760 -0.2756464431  2.787019e-01
#> [1540,]  1.7500778934  3.3692846519  4.052123e+00
#> [1541,] -1.0871508852 -1.5632004434 -2.223166e+00
#> [1542,]  1.3217308296  2.4605716814  3.013686e+00
#> [1543,] -0.2735809545 -0.2379944814 -4.732268e-01
#> [1544,]  0.2604711365 -0.6667670048 -4.522558e-02
#> [1545,]  0.8250631769  0.4683563267  1.288755e+00
#> [1546,] -0.3381235299  0.0971498837 -3.677190e-01
#> [1547,]  0.2320194935  0.6127999411  6.294019e-01
#> [1548,]  0.9305594999  1.5222103587  2.005152e+00
#> [1549,] -1.2803449973 -3.5767742804 -3.581524e+00
#> [1550,]  0.8322333898  2.9199883832  2.658249e+00
#> [1551,] -2.3707330463 -3.8416096203 -5.088188e+00
#> [1552,]  0.0019364778 -0.6618539642 -3.648865e-01
#> [1553,]  0.5650111957  1.1255846869  1.329210e+00
#> [1554,]  0.5932804397  2.8527752215  2.322979e+00
#> [1555,] -0.2785048509 -0.9089297083 -8.517078e-01
#> [1556,]  1.1028654487  2.0345581468  2.504345e+00
#> [1557,] -0.2637677874 -0.7434486605 -7.414959e-01
#> [1558,]  0.2029295623  0.2213078530  3.758656e-01
#> [1559,]  1.8378025155  2.8200827355  3.856730e+00
#> [1560,] -0.9034004247 -1.4627113526 -1.938265e+00
#> [1561,]  1.1493652263  0.4394141209  1.677091e+00
#> [1562,]  0.5916085646  1.3288098551  1.475158e+00
#> [1563,] -1.5119751913 -2.6507122127 -3.356437e+00
#> [1564,] -0.3685500992 -1.4030222351 -1.238193e+00
#> [1565,]  0.4562162990  1.4405555291  1.368340e+00
#> [1566,]  0.6816321081  0.4546022955  1.102267e+00
#> [1567,] -0.5393450592 -1.5554457871 -1.535760e+00
#> [1568,]  0.7152045945  2.0088851113  2.006693e+00
#> [1569,] -1.8290699988 -3.0046958884 -3.948293e+00
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#> [1571,] -0.5526643412  0.0486102457 -6.621845e-01
#> [1572,] -0.0037881384  1.4553272998  8.029220e-01
#> [1573,]  0.0039176320 -0.2646700994 -1.419956e-01
#> [1574,]  0.6093512898  0.5340556971  1.056227e+00
#> [1575,] -1.6086724338 -2.7425187950 -3.527965e+00
#> [1576,] -0.4725855728 -0.8343093424 -1.052311e+00
#> [1577,]  2.2894327494  3.8309800504  4.980909e+00
#> [1578,]  0.4621299876  0.1268229396  6.466481e-01
#> [1579,] -0.7861855383 -0.7935575392 -1.420749e+00
#> [1580,] -0.4676530304 -1.5385966658 -1.437011e+00
#> [1581,]  0.7481218177  0.2225325151  1.056389e+00
#> [1582,] -0.3283850483 -1.0176707633 -9.742541e-01
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#> [1584,]  2.1472890414  3.2780941739  4.496831e+00
#> [1585,]  1.2291752027  1.8832950081  2.577906e+00
#> [1586,]  1.0439960919  1.8419287662  2.324035e+00
#> [1587,]  2.0453341883  4.3130547400  4.944055e+00
#> [1588,]  0.0081195331  0.4929696105  2.837024e-01
#> [1589,] -0.2317503663 -0.1056719122 -3.476315e-01
#> [1590,]  1.4793158204  1.5937168844  2.729123e+00
#> [1591,]  0.1700873345  1.8012463898  1.211712e+00
#> [1592,] -1.1047129225 -1.4137977492 -2.162153e+00
#> [1593,] -0.2711391920 -0.2204819685 -4.604633e-01
#> [1594,]  1.3923128850  1.9982918659  2.845154e+00
#> [1595,] -0.6482646935 -1.4935560351 -1.637234e+00
#> [1596,] -0.7663553406 -1.0845536576 -1.557511e+00
#> [1597,]  1.0272432031  2.3894403401  2.606991e+00
#> [1598,] -0.9999483337 -3.4290920730 -3.149918e+00
#> [1599,]  0.6300956591  0.2600032103  9.300073e-01
#> [1600,]  2.2399311749  3.0413099223  4.480948e+00
#> [1601,] -3.0761688434 -5.1396621585 -6.688217e+00
#> [1602,]  0.2926481606  1.4036109376  1.143872e+00
#> [1603,]  2.1217271697  4.0291722042  4.881772e+00
#> [1604,]  0.6538927482  1.6297647220  1.719842e+00
#> [1605,]  0.3263306987  0.6203193222  7.511790e-01
#> [1606,]  1.8705893716  3.3643787649  4.199676e+00
#> [1607,] -2.8288282557 -4.8682022010 -6.229140e+00
#> [1608,]  0.7398378649  1.2456416983  1.613842e+00
#> [1609,] -0.5225150491 -0.6773787627 -1.027482e+00
#> [1610,] -0.1945909283 -0.0181847215 -2.527427e-01
#> [1611,]  0.7745855356  1.1154356172  1.584912e+00
#> [1612,]  0.9171989491  1.5289708893  1.992243e+00
#> [1613,]  0.0611143845  1.4601852040  8.865500e-01
#> [1614,]  0.3632422661  0.7820769945  8.869757e-01
#> [1615,]  0.6318491748  0.4120111762  1.016552e+00

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#> [1616,] -1.2590621735 -3.3593559142 -3.434327e+00
#> [1617,]  0.8215592249  1.5690873964  1.895245e+00
#> [1618,] -0.4632661166 -1.0561120522 -1.163781e+00
#> [1619,] -0.2663639964 -0.9262305543 -8.461696e-01
#> [1620,]  1.4968904229  1.8597410643  2.898670e+00
#> [1621,] -2.2793329755 -3.7102050141 -4.901290e+00
#> [1622,]  0.7102376459  1.0607607471  1.474330e+00
#> [1623,]  1.5815205906  1.9580155319  3.058741e+00
#> [1624,]  0.4522133299 -1.2184383011 -1.122814e-01
#> [1625,] -0.6455750767 -0.3904670038 -1.021712e+00
#> [1626,] -0.5118374017 -0.2465685247 -7.750860e-01
#> [1627,] -0.3402866520 -0.1225835050 -4.923592e-01
#> [1628,]  0.9643384387  0.1288150586  1.273997e+00
#> [1629,]  0.0903120171 -0.5665875846 -2.018151e-01
#> [1630,]  1.1493231836  2.9312541603  3.059906e+00
#> [1631,] -0.2502571795 -0.5241500530 -6.029469e-01
#> [1632,] -0.8949173837 -1.5805500027 -1.993083e+00
#> [1633,]  0.9037502505  3.0880405181  2.840691e+00
#> [1634,] -0.5081648318 -0.1259877900 -7.035891e-01
#> [1635,] -0.1103204930 -0.2327686480 -2.667443e-01
#> [1636,]  0.6742733733  1.3690622775  1.600577e+00
#> [1637,]  1.0555637665  2.8510143349  2.898460e+00
#> [1638,] -0.5204843057 -1.0063247138 -1.207501e+00
#> [1639,] -0.6844015748 -2.0635699313 -1.998630e+00
#> [1640,] -0.0224306269 -1.3993006185 -8.045238e-01
#> [1641,] -1.0400465621 -1.2481569132 -1.989592e+00
#> [1642,]  1.7365627254  4.7982507788  4.828287e+00
#> [1643,]  0.1557487406 -0.7471381023 -2.204149e-01
#> [1644,]  0.1307950407 -0.1623843297  7.298224e-02
#> [1645,]  0.0368820469 -0.3233567626 -1.334583e-01
#> [1646,] -1.7897219689 -3.1807474370 -3.996928e+00
#> [1647,] -1.0160697090 -1.4964414367 -2.097481e+00
#> [1648,]  0.5407473359  0.9210830895  1.185463e+00
#> [1649,]  2.3516273338  3.4294651814  4.835641e+00
#> [1650,] -0.1794784114 -0.3109544427 -3.963726e-01
#> [1651,] -0.5256667873  0.0616755198 -6.212684e-01
#> [1652,]  0.6811148705  0.7397659908  1.259876e+00
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#> [1654,]  0.8267692784  2.1428014630  2.220130e+00
#> [1655,]  2.7764340514  4.7551567097  6.101070e+00
#> [1656,] -0.8611333675 -1.7546447297 -2.047570e+00
#> [1657,]  1.4106680366  2.0667375528  2.906027e+00
#> [1658,]  0.0892575059  0.2736154898  2.631474e-01
#> [1659,]  1.0562712379  2.0234409831  2.440074e+00
#> [1660,] -0.4187544646 -0.5657276753 -8.361335e-01

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#> [1661,] 1.1345269779 2.7237575948 2.926303e+00
#> [1662,] -1.7756269268 -2.3783412992 -3.534050e+00
#> [1663,] -1.6828129511 -1.9171510462 -3.162372e+00
#> [1664,] -1.9652733416 -3.8025840296 -4.560931e+00
#> [1665,] 0.3454232586 1.3142141030 1.160070e+00
#> [1666,] 1.8003544292 1.5729883407 3.117948e+00
#> [1667,] 0.3641523283 0.2609796795 5.989233e-01
#> [1668,] -0.7453417142 -2.4889773196 -2.310704e+00
#> [1669,] 0.1539663370 -0.6249205387 -1.548119e-01
#> [1670,] 0.2812922542 0.4272606176 5.878775e-01
#> [1671,] 1.0319825167 1.2077942542 1.957136e+00
#> [1672,] 2.4009291702 3.3473595479 4.851554e+00
#> [1673,] 2.1151907318 2.8601623067 4.224870e+00
#> [1674,] 1.1900418787 2.2031531070 2.706616e+00
#> [1675,] -0.9387080010 -2.6984260900 -2.668063e+00
#> [1676,] 1.3054920954 1.8534571981 2.656513e+00
#> [1677,] 0.9638024616 1.6676342246 2.127309e+00
#> [1678,] -1.7264332778 -3.1666342460 -3.910177e+00
#> [1679,] 0.7470779343 1.8309206889 1.947675e+00
#> [1680,] 0.7277252079 1.4498083468 1.712041e+00
#> [1681,] 1.6867597005 3.8894403539 4.261831e+00
#> [1682,] -0.0381215646 -0.6181951976 -3.906093e-01
#> [1683,] -1.1887547415 -2.2173919519 -2.712913e+00
#> [1684,] 1.5851841977 1.9625125126 3.065805e+00
#> [1685,] -2.0185958079 -3.6913374154 -4.565686e+00
#> [1686,] 1.6745654526 1.4972708482 2.919072e+00
#> [1687,] 0.8795432927 0.8413845302 1.563706e+00
#> [1688,] 0.5644807949 0.7855217921 1.139828e+00
#> [1689,] -1.5713526771 -1.5154309255 -2.800445e+00
#> [1690,] -0.5092411015 -1.5814149586 -1.512632e+00
#> [1691,] -0.5135041658 -0.8441258573 -1.108784e+00
#> [1692,] 1.0936340430 1.2506017880 2.057771e+00
#> [1693,] 2.6462472428 4.5121175922 5.803853e+00
#> [1694,] -0.4930428946 0.0004558521 -6.145615e-01
#> [1695,] 0.5408021237 1.5009257405 1.507320e+00
#> [1696,] 1.2191326998 1.4807363162 2.341980e+00
#> [1697,] 0.5436686523 -0.0118367291 6.713748e-01
#> [1698,] 0.4372111342 1.8054401160 1.547137e+00
#> [1699,] -0.6056994333 -1.0672359341 -1.347566e+00
#> [1700,] -0.4237247567 -0.3607384163 -7.285708e-01
#> [1701,] -0.9333709634 -2.5729187792 -2.591757e+00
#> [1702,] 1.2225311224 2.0657513437 2.670877e+00
#> [1703,] -2.1687506516 -3.4321046836 -4.609062e+00
#> [1704,] 0.4811245645 0.3759940960 8.086135e-01
#> [1705,] 0.0698046979 0.9031339494 5.882466e-01

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#> [1706,] -0.7465657874 -0.2506824212 -1.070071e+00
#> [1707,] -0.4126800970 -0.0300346380 -5.312716e-01
#> [1708,] -1.1199631009 -2.2701716176 -2.656421e+00
#> [1709,] -1.6325819995 -3.1627587541 -3.790995e+00
#> [1710,] 0.7807398110 2.6388877590 2.438039e+00
#> [1711,] -1.1313905015 -1.7668339270 -2.391340e+00
#> [1712,] -1.3226370287 -1.9090087079 -2.708721e+00
#> [1713,] -0.2199341423 0.1295482016 -2.023596e-01
#> [1714,] 1.5070521146 3.3131798566 3.717939e+00
#> [1715,] -0.3328013615 -1.2871069417 -1.129287e+00
#> [1716,] -1.5976846052 -1.9363475101 -3.066872e+00
#> [1717,] -0.9758009504 -2.2412177690 -2.460586e+00
#> [1718,] 0.9304568464 2.1690947892 2.364018e+00
#> [1719,] 0.2040888855 0.9048182138 7.566309e-01
#> [1720,] -0.4038003073 -0.5997697041 -8.363778e-01
#> [1721,] -0.6456687692 -0.4020663840 -1.028266e+00
#> [1722,] -0.4656520408 0.4614975273 -3.245468e-01
#> [1723,] 0.2062775543 0.3260674631 4.381777e-01
#> [1724,] 0.2009136382 1.3315619723 9.894964e-01
#> [1725,] 1.1561778918 2.7265434976 2.954848e+00
#> [1726,] -1.6146336774 -3.8646765856 -4.158149e+00
#> [1727,] 0.0548294509 -1.6318741161 -8.372506e-01
#> [1728,] 0.7291556455 1.9665542150 2.000597e+00
#> [1729,] -0.2576697315 -1.4031441506 -1.099995e+00
#> [1730,] 1.6392899692 2.6796751841 3.531269e+00
#> [1731,] 2.1655835552 2.5362648930 4.107959e+00
#> [1732,] 0.0127865329 -0.2557179619 -1.259682e-01
#> [1733,] -0.7189459607 -1.4109427521 -1.679525e+00
#> [1734,] -0.6924370767 -0.6317599787 -1.214055e+00
#> [1735,] -2.2993770513 -3.1394907298 -4.609562e+00
#> [1736,] -0.0968975269 -0.4897746235 -3.926336e-01
#> [1737,] 1.1022250001 0.7270364169 1.777927e+00
#> [1738,] -0.5712448089 -1.9844136337 -1.813597e+00
#> [1739,] -2.0286658558 -3.3370906319 -4.381651e+00
#> [1740,] 0.0440025042 1.3810852422 8.213147e-01
#> [1741,] -0.1199866499 -0.0864845075 -1.976162e-01
#> [1742,] -1.2053207743 -2.2853446095 -2.771281e+00
#> [1743,] -0.0355440950 -0.4759815237 -3.084726e-01
#> [1744,] -0.7657888950 -0.0936889553 -1.006917e+00
#> [1745,] 0.7133383946 2.1661418406 2.091636e+00
#> [1746,] 0.2316014933 0.5349951987 5.857023e-01
#> [1747,] -0.1032622830 -0.8942249170 -6.250234e-01
#> [1748,] 1.3786094028 2.8199089749 3.284029e+00
#> [1749,] -0.2112220896 -1.0223337690 -8.307421e-01
#> [1750,] 0.0875427737 0.2665605773 2.570940e-01

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#> [1751,] -2.5573864929 -4.6903271279 -5.791944e+00
#> [1752,] -0.2247851265  0.8335627873  1.822900e-01
#> [1753,]  1.2978925603  1.1672012871  2.266193e+00
#> [1754,]  0.4738031049  0.9585750319  1.122792e+00
#> [1755,]  0.0115005984  0.1080518130  7.430524e-02
#> [1756,]  0.0940166121  0.7742769824  5.469281e-01
#> [1757,]  0.9080262851  1.8508801882  2.159451e+00
#> [1758,]  0.1392112150  0.8602214014  6.509804e-01
#> [1759,] -1.1803939811 -2.0587878490 -2.614468e+00
#> [1760,] -0.9306381953 -2.2247165538 -2.395111e+00
#> [1761,]  0.4582514705  1.4142533158  1.356282e+00
#> [1762,] -0.9444041476 -1.0235676346 -1.745690e+00
#> [1763,]  1.4332507184  2.4643592237  3.154851e+00
#> [1764,] -0.4527062789 -2.5023808803 -1.953232e+00
#> [1765,]  0.5906261443 -0.8184922012  2.822699e-01
#> [1766,] -2.9958659439 -4.7196126248 -6.354971e+00
#> [1767,]  1.0804536299  0.7564905715  1.767124e+00
#> [1768,] -0.4361623405  0.0787280642 -5.001948e-01
#> [1769,]  0.4390425345  1.0799132222  1.146784e+00
#> [1770,]  0.4627012187  2.0395819875  1.708862e+00
#> [1771,] -1.4931542134 -2.8307591364 -3.432886e+00
#> [1772,]  0.6582200922  0.6889459684  1.203123e+00
#> [1773,] -1.2689843149 -1.0389343101 -2.158963e+00
#> [1774,]  0.1999125872  0.0083689678  2.539313e-01
#> [1775,] -2.3909946415 -4.7370980685 -5.610413e+00
#> [1776,]  0.4382418903  0.2219426600  6.696476e-01
#> [1777,] -0.8824678977 -2.1749371416 -2.307419e+00
#> [1778,]  1.9187460503  3.8508799966  4.529714e+00
#> [1779,] -0.5507518014 -2.0903748090 -1.846847e+00
#> [1780,] -1.0879038236 -1.9010817344 -2.411615e+00
#> [1781,] -1.3236994859 -4.1419560958 -3.949238e+00
#> [1782,]  0.7167803329  0.8826987042  1.383671e+00
#> [1783,]  0.2031108503 -0.4700490711 -7.582467e-03
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#> [1785,]  2.2149051865  3.3176284275  4.603086e+00
#> [1786,]  1.6978374370  2.7961775230  3.668930e+00
#> [1787,] -0.2577260937 -0.7766089418 -7.523646e-01
#> [1788,]  0.1714099371 -0.0517709842  1.850140e-01
#> [1789,] -0.3481466591 -0.2270455119 -5.601325e-01
#> [1790,] -0.2558171883 -0.8959652141 -8.162220e-01
#> [1791,] -0.7926655464 -0.4336684424 -1.229106e+00
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#> [1793,] -0.5473233617 -0.6198743251 -1.026505e+00
#> [1794,] -0.2088457096  0.2955573031 -9.640441e-02
#> [1795,] -1.4717671596 -2.4359601967 -3.187120e+00

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#> [1796,] -0.0629414827  0.6719108243  2.943956e-01
#> [1797,] -1.3792146340 -3.0655714180 -3.421116e+00
#> [1798,]  0.2265431207  0.6261110130  6.299600e-01
#> [1799,] -1.7066235956 -2.6263436423 -3.585636e+00
#> [1800,]  0.9669130445  1.6502130196  2.121520e+00
#> [1801,] -1.2875747811 -2.1105229149 -2.776831e+00
#> [1802,]  1.1848118857  2.3748727383  2.795391e+00
#> [1803,]  1.7667254750  2.0519634175  3.341824e+00
#> [1804,] -0.1884035636 -1.2440770148 -9.253461e-01
#> [1805,] -0.6859283931 -1.7462006563 -1.824407e+00
#> [1806,] -1.1995069244 -2.8866139591 -3.097711e+00
#> [1807,] -0.3934793749  0.4368335982 -2.482364e-01
#> [1808,]  0.8911450212  1.0147412379  1.674379e+00
#> [1809,] -1.1369905747 -3.6362846814 -3.435790e+00
#> [1810,] -1.0806969062 -2.5329494817 -2.753288e+00
#> [1811,]  0.6468383394  0.5477717924  1.110585e+00
#> [1812,]  1.1315660247  2.3125834029  2.694427e+00
#> [1813,] -0.6174002851 -0.5058668028 -1.050620e+00
#> [1814,]  0.1442295793  0.8549923826  6.543363e-01
#> [1815,] -1.1614429796 -2.6965883276 -2.944789e+00
#> [1816,]  1.1338999703  2.5891322275  2.850810e+00
#> [1817,] -0.1933885495 -1.3962096051 -1.015989e+00
#> [1818,]  1.7054412170  2.5700135592  3.552900e+00
#> [1819,] -0.8307803420 -2.7028340045 -2.535926e+00
#> [1820,] -0.0366772161 -0.0876600830 -9.438342e-02
#> [1821,]  0.5485885110  2.1527140589  1.878745e+00
#> [1822,]  0.1930695853  1.0712124995  8.352319e-01
#> [1823,] -0.0158319541 -1.6664931310 -9.445760e-01
#> [1824,] -0.1966372107  0.1173976968 -1.800518e-01
#> [1825,]  0.8075492857  1.7260173852  1.964865e+00
#> [1826,]  1.6117803881  1.5316425509  2.859855e+00
#> [1827,] -1.1603583357 -1.9746555395 -2.542794e+00
#> [1828,] -0.5951068726 -0.6967058509 -1.128729e+00
#> [1829,] -0.7222188998 -2.7006138784 -2.399320e+00
#> [1830,] -1.8405933220 -1.7631294179 -3.273645e+00
#> [1831,]  0.0242330641  1.2756496068  7.381503e-01
#> [1832,]  1.3248719409  1.2725956497  2.358326e+00
#> [1833,] -0.1706469894  0.2924430979 -5.049964e-02
#> [1834,]  0.1298685359 -0.2931407437 -7.374241e-04
#> [1835,]  0.8412522554  1.2107896311  1.720962e+00
#> [1836,] -0.7835486103 -1.2408298166 -1.665678e+00
#> [1837,] -0.6983608475 -1.8185913905 -1.880084e+00
#> [1838,]  0.9253330805  0.8122776752  1.604652e+00
#> [1839,] -0.4997932896 -0.8519117745 -1.096007e+00
#> [1840,] -1.7354869276 -3.0396127756 -3.850975e+00

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#> [1841,] -0.3170892993 -0.3708273029 -6.011975e-01
#> [1842,]  0.1411821565 -0.7942870004 -2.647448e-01
#> [1843,]  0.9128239273 -0.3213340906  9.599459e-01
#> [1844,]  1.5847504788  2.7105947012  3.480418e+00
#> [1845,]  0.1397143507  0.1235528610  2.427876e-01
#> [1846,] -0.2358048358  1.6721148880  6.339099e-01
#> [1847,] -0.1324378106 -0.0553025688 -1.958379e-01
#> [1848,]  0.1460964170  0.4088556913  4.090770e-01
#> [1849,] -1.4129288673 -2.1935599450 -2.979227e+00
#> [1850,]  0.4533612066  1.6421354922  1.476649e+00
#> [1851,]  0.6919421729  1.6672652105  1.788100e+00
#> [1852,]  0.1857948997  0.1100675106  2.927653e-01
#> [1853,]  1.0409224130  2.4983016817  2.684462e+00
#> [1854,]  0.2184403456  0.2527312074  4.126459e-01
#> [1855,]  0.3818728773  0.7580027000  8.968475e-01
#> [1856,] -0.0792307054  0.2848765293  5.929547e-02
#> [1857,]  0.8602636073  1.1927164725  1.734639e+00
#> [1858,]  0.1476800761 -1.0785065980 -4.143720e-01
#> [1859,] -0.2925655585 -1.4614543056 -1.175869e+00
#> [1860,] -1.0161972058 -1.8169835576 -2.275527e+00
#> [1861,]  0.5158024285 -0.8527649559  1.699463e-01
#> [1862,] -1.7987306054 -3.9177842961 -4.417187e+00
#> [1863,]  0.7549542963  0.9682549862  1.478754e+00
#> [1864,] -0.0734681937 -0.0279158060 -1.071054e-01
#> [1865,]  1.8882348722  2.8008678134  3.908955e+00
#> [1866,] -0.6326142730 -1.2185595391 -1.465107e+00
#> [1867,]  1.0089746319  3.2931932017  3.085755e+00
#> [1868,]  0.5259034330  1.2017461702  1.322710e+00
#> [1869,]  0.1669811824  1.3741928879  9.708416e-01
#> [1870,] -0.3947830614 -1.3687792605 -1.251902e+00
#> [1871,] -0.3695988235 -0.3306792244 -6.443953e-01
#> [1872,]  0.1987673291 -0.1731211779  1.517838e-01
#> [1873,] -1.5402404314 -1.2668209537 -2.623681e+00
#> [1874,] -0.9204260968 -1.6210551726 -2.047370e+00
#> [1875,]  1.0978316831  1.3553320580  2.121126e+00
#> [1876,]  2.3455765384  3.6842604955  4.969496e+00
#> [1877,] -0.5213199008 -1.2183855388 -1.326228e+00
#> [1878,]  0.4607642109 -0.2706805069  4.243472e-01
#> [1879,] -1.1132822380 -0.9192588805 -1.898390e+00
#> [1880,] -1.0408737835 -0.8512671911 -1.770366e+00
#> [1881,]  0.8075492394  2.5721341297  2.434424e+00
#> [1882,] -0.2214087810  0.3604779464 -7.604207e-02
#> [1883,] -0.1766011159 -0.6364394347 -5.734152e-01
#> [1884,] -0.6403436650 -1.0741211695 -1.394588e+00
#> [1885,] -1.7545286526 -2.6306967578 -3.647788e+00

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#> [1886,] -0.2551187975 -1.8927445787 -1.368522e+00
#> [1887,] -0.8401312726 -2.2550597307 -2.299090e+00
#> [1888,] -1.8952571329 -2.6303876758 -3.823102e+00
#> [1889,] 0.0463737142 0.5995630632 3.905595e-01
#> [1890,] 2.7944112828 3.3761721427 5.358208e+00
#> [1891,] -0.5453121094 -1.4112109752 -1.463156e+00
#> [1892,] 1.9517795181 2.3513826249 3.738748e+00
#> [1893,] 0.5027631845 1.3560528467 1.379488e+00
#> [1894,] -1.2928456533 -1.8388069813 -2.632613e+00
#> [1895,] 0.5338590216 0.1083562149 7.258445e-01
#> [1896,] -1.8460767234 -2.7820677820 -3.845951e+00
#> [1897,] 0.2820484685 0.5105152120 6.350233e-01
#> [1898,] -1.4982680999 -2.0594035547 -3.011193e+00
#> [1899,] -0.4339078041 -1.3899137655 -1.312418e+00
#> [1900,] -0.0025431534 1.3400497956 7.405003e-01
#> [1901,] -1.1419672657 -2.1434695509 -2.613546e+00
#> [1902,] -0.3113466612 -1.2412344767 -1.077076e+00
#> [1903,] 1.5194567856 2.4588324316 3.259281e+00
#> [1904,] -1.3189147726 -3.0237564618 -3.322718e+00
#> [1905,] 1.2555502019 2.2353692171 2.806182e+00
#> [1906,] -0.3308522650 -0.9634238772 -9.472259e-01
#> [1907,] -0.4146628482 -1.7078109700 -1.464840e+00
#> [1908,] 0.9517673397 2.9921397933 2.847347e+00
#> [1909,] -0.5615636856 -1.0453048254 -1.280359e+00
#> [1910,] 0.7180287551 2.0147960538 2.013495e+00
#> [1911,] 0.3531606088 -0.3595560578 2.408455e-01
#> [1912,] 1.3186417936 2.6656910484 3.123666e+00
#> [1913,] 1.1001911041 2.2866671529 2.640920e+00
#> [1914,] 1.3065649921 1.5351834912 2.481222e+00
#> [1915,] 1.2136789332 2.6432177438 2.980308e+00
#> [1916,] -3.3059268495 -5.0502380391 -6.925094e+00
#> [1917,] -0.4758811658 -0.7788699413 -1.025654e+00
#> [1918,] 1.8777660180 1.7402588481 3.307307e+00
#> [1919,] -0.1612253679 -0.3457925506 -3.929451e-01
#> [1920,] 0.6967676609 0.3446258409 1.060108e+00
#> [1921,] 0.4042308464 0.0034186614 5.059648e-01
#> [1922,] -1.2402955578 -2.4395835164 -2.900490e+00
#> [1923,] 2.1479411462 3.7007486577 4.732199e+00
#> [1924,] 0.8571189717 1.5670205885 1.938441e+00
#> [1925,] -0.8588497292 -0.7532898050 -1.489012e+00
#> [1926,] -1.4045800106 -0.9326833074 -2.269083e+00
#> [1927,] 1.1058726305 2.0866983463 2.537031e+00
#> [1928,] 1.7088907172 3.8384124123 4.261110e+00
#> [1929,] -0.8164042713 -1.1459278818 -1.653981e+00
#> [1930,] 0.7671761041 2.2775822034 2.220616e+00

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#> [1931,] 1.0662823687 1.5535231188 2.191773e+00
#> [1932,] 0.6036676050 1.2634832797 1.453942e+00
#> [1933,] 0.3816530312 1.2751029422 1.183542e+00
#> [1934,] 2.3407784094 4.2918825182 5.300718e+00
#> [1935,] 0.2308167071 1.1462467696 9.239427e-01
#> [1936,] 2.6799199337 4.8348999435 6.024973e+00
#> [1937,] -0.3051071775 -0.9583131061 -9.122861e-01
#> [1938,] 0.7912360158 1.9329102070 2.059339e+00
#> [1939,] 0.3157335496 1.3176840290 1.124973e+00
#> [1940,] -0.1394134705 -0.4930074503 -4.474442e-01
#> [1941,] -0.8381515089 -0.3841505310 -1.258345e+00
#> [1942,] -0.7191181441 -1.2259301702 -1.577066e+00
#> [1943,] -0.1301728013 -1.2241751217 -8.416888e-01
#> [1944,] -1.3941128145 -1.3426870343 -2.483565e+00
#> [1945,] 0.4899236545 2.2134537760 1.839299e+00
#> [1946,] 0.4300393700 1.5912597325 1.419333e+00
#> [1947,] -1.9210507405 -3.3553896612 -4.257612e+00
#> [1948,] -1.3683040196 -2.8345096872 -3.279281e+00
#> [1949,] -0.7736480623 -1.9141980942 -2.027023e+00
#> [1950,] -1.9135047246 -2.9611462028 -4.029414e+00
#> [1951,] 1.2343214618 2.7952344087 3.090412e+00
#> [1952,] 0.4145673816 0.1475735390 5.988542e-01
#> [1953,] -0.8250219158 -1.9467889325 -2.109172e+00
#> [1954,] 0.0909703215 -0.1111303469 5.176545e-02
#> [1955,] -0.6732823414 0.7460269086 -4.255556e-01
#> [1956,] -2.0751543364 -3.7818101203 -4.686421e+00
#> [1957,] -0.1578660949 -0.8335484642 -6.594403e-01
#> [1958,] -1.2478997908 -2.8650557694 -3.146092e+00
#> [1959,] 0.4229250187 0.7153366980 9.243608e-01
#> [1960,] -0.5928206719 -0.7359240334 -1.147642e+00
#> [1961,] 1.1260014091 1.2008045037 2.070497e+00
#> [1962,] 1.6558222943 3.2552717365 3.871316e+00
#> [1963,] 0.1192735833 0.8819489083 6.381764e-01
#> [1964,] -0.3849599834 -0.4852872569 -7.493514e-01
#> [1965,] -0.3794909413 -0.4126033877 -7.021951e-01
#> [1966,] 2.6376796705 5.6913516076 6.447595e+00
#> [1967,] 2.7306168909 4.1639594170 5.715847e+00
#> [1968,] -0.5264961514 -1.6099584678 -1.549990e+00
#> [1969,] -1.3976831707 -2.4940899191 -3.126998e+00
#> [1970,] -0.5348801300 -1.6650371357 -1.591011e+00
#> [1971,] 0.1907498670 0.0300828930 2.545559e-01
#> [1972,] -1.0995129336 0.6567163771 -1.006620e+00
#> [1973,] 0.0491998552 -0.4034531565 -1.625484e-01
#> [1974,] 1.3501148420 3.0752342421 3.390192e+00
#> [1975,] -0.7836914643 -2.5558160370 -2.395618e+00

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#> [1976,] 0.3662436707 0.5541513832 7.642292e-01
#> [1977,] -0.8227360706 -1.2624900646 -1.726564e+00
#> [1978,] -0.4594452121 -0.6252211487 -9.198904e-01
#> [1979,] -0.6702726875 -0.1805472487 -9.360125e-01
#> [1980,] 0.8297436972 0.5983074824 1.366709e+00
#> [1981,] 0.1719226578 0.3240318636 3.942082e-01
#> [1982,] 1.0592450385 2.1870437593 2.534575e+00
#> [1983,] -0.4162080338 0.8578355306 -4.294013e-02
#> [1984,] 1.5562940744 2.9567316536 3.581529e+00
#> [1985,] -0.4473600034 -0.5863242265 -8.832342e-01
#> [1986,] -0.8353789714 -1.6194169176 -1.940409e+00
#> [1987,] -0.3563045420 1.1577715531 1.982102e-01
#> [1988,] -1.3808713671 -2.5225907700 -3.121851e+00
#> [1989,] -0.4821794600 -0.6477115776 -9.607208e-01
#> [1990,] 0.5522835477 1.2436235038 1.378845e+00
#> [1991,] -1.9341210325 -2.0001038893 -3.521783e+00
#> [1992,] 0.4731366777 0.4700787442 8.508658e-01
#> [1993,] 1.2663933669 1.8517363109 2.606803e+00
#> [1994,] 2.0507639582 3.8147856341 4.674307e+00
#> [1995,] 0.0673475445 -0.4561245836 -1.691490e-01
#> [1996,] 1.2473687061 2.8846917784 3.156326e+00
#> [1997,] -0.9756139556 -1.4416320099 -2.016616e+00
#> [1998,] -0.1788618857 -1.3947552833 -9.970679e-01
#> [1999,] 1.2712874010 2.7197752629 3.094631e+00
#> [2000,] 0.4667054472 0.3723487385 7.886101e-01
#>
#> [[1]][[16]]$value[[1]]$decomposition
#> [1] "eigen"
#>
#>
#>
#> [[1]][[16]]$visible
#> [1] TRUE

```

Environment

```
ls()  
#> [1] "i"      "root"   "tex_file"
```

Class

```
#> [[1]]  
#> [1] "character"  
#>  
#> [[2]]  
#> [1] "root_criterion"  
#>  
#> [[3]]  
#> [1] "character"
```

References

R Core Team. (2023). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria. <https://www.R-project.org/>