

semmcci: Internal Tests

Ivan Jacob Agaloos Pesigan

Tests

```
#> test-semmcci-mc-unc-simple-med
#> Test passed
#> Test passed
#> Test passed
#> Test passed

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

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

#> 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

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

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

#> test-semmcci-mc-simple-med-defined-mi-amelia

#> Test passed

#> test-semmcci-mc-simple-med-defined-mi-list

#> Test passed

#> test-semmcci-mc-simple-med-defined-mi-mice

#> Test passed

#> test-semmcci-mc-simple-med-defined-none

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

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

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

#> test-semmcci-mc-simple-med-std-defined-meanstructure

#> 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

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

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

#> test-semmcci-mc-methods

#> Monte Carlo Confidence Intervals
#>
      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> visual=~x1      1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> visual=~x2      0.5535 0.0961 100 0.3184 0.3194 0.3671 0.7526 0.7634 0.7636
#> visual=~x3      0.7294 0.1023 100 0.4997 0.5049 0.5258 0.9147 0.9300 0.9358
#> textual=~x4      1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> textual=~x5      1.1131 0.0620 100 0.9059 0.9180 0.9696 1.2169 1.2498 1.2715
#> textual=~x6      0.9261 0.0589 100 0.7845 0.7847 0.8015 1.0450 1.0861 1.0902
#> speed=~x7        1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> speed=~x8        1.1800 0.1676 100 0.7770 0.7864 0.8665 1.5857 1.6175 1.6227
#> speed=~x9        1.0815 0.1486 100 0.7424 0.7428 0.7933 1.3591 1.4460 1.4845
#> x1~~x1           0.5491 0.1158 100 0.2332 0.2647 0.3655 0.8188 0.9040 0.9043
#> x2~~x2           1.1338 0.1087 100 0.8117 0.8631 0.9565 1.3528 1.3878 1.3973
#> x3~~x3           0.8443 0.0936 100 0.6474 0.6519 0.6763 1.0373 1.0504 1.0519
#> x4~~x4           0.3712 0.0503 100 0.2611 0.2647 0.2774 0.4734 0.4911 0.4920
#> x5~~x5           0.4463 0.0639 100 0.3021 0.3076 0.3241 0.5845 0.5882 0.5892
#> x6~~x6           0.3562 0.0402 100 0.2562 0.2657 0.2858 0.4328 0.4536 0.4627
#> x7~~x7           0.7994 0.0766 100 0.6041 0.6227 0.6752 0.9583 1.0114 1.0155
#> x8~~x8           0.4877 0.0719 100 0.3279 0.3372 0.3580 0.6343 0.6622 0.6755
#> x9~~x9           0.5661 0.0628 100 0.4066 0.4200 0.4453 0.6686 0.7244 0.7501
#> visual~~visual   0.8093 0.1270 100 0.4677 0.4905 0.5677 1.0381 1.1245 1.1709
#> textual~~textual 0.9795 0.1178 100 0.6925 0.7194 0.7649 1.2067 1.2784 1.3244
#> speed~~speed     0.3837 0.0840 100 0.0995 0.1356 0.2298 0.5316 0.5581 0.5702
#> visual~~textual  0.4082 0.0699 100 0.2430 0.2526 0.2733 0.5518 0.5673 0.5683
#> visual~~speed    0.2622 0.0548 100 0.1353 0.1419 0.1588 0.3543 0.3688 0.3780
#> textual~~speed   0.1735 0.0542 100 0.0446 0.0576 0.0805 0.2991 0.3235 0.3406
#> Monte Carlo Confidence Intervals (Multiple Imputation Estimates)
#>
      est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> visual=~x1      1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> visual=~x2      0.5535 0.1011 100 0.2572 0.2843 0.3692 0.7636 0.8380 0.8663

```

```

#> visual=~x3      0.7294 0.1203 100 0.2924 0.3508 0.4939 0.9330 0.9790 0.9896
#> textual=~x4     1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> textual=~x5     1.1131 0.0573 100 0.9818 0.9891 1.0032 1.2323 1.2600 1.2649
#> textual=~x6     0.9261 0.0538 100 0.7889 0.7943 0.8149 1.0323 1.0548 1.0599
#> speed=~x7       1.0000 0.0000 100 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000
#> speed=~x8       1.1800 0.1645 100 0.8443 0.8692 0.9165 1.5372 1.6276 1.6632
#> speed=~x9       1.0815 0.1442 100 0.7945 0.8077 0.8275 1.3836 1.4658 1.5199
#> x1~~x1          0.5491 0.1232 100 0.2103 0.2113 0.2671 0.7411 0.8158 0.8158
#> x2~~x2          1.1338 0.0981 100 0.8187 0.8669 0.9795 1.3254 1.3461 1.3574
#> x3~~x3          0.8443 0.0986 100 0.5445 0.6078 0.6876 1.0371 1.0821 1.0901
#> x4~~x4          0.3712 0.0495 100 0.2357 0.2564 0.2900 0.4625 0.5028 0.5293
#> x5~~x5          0.4463 0.0568 100 0.3177 0.3254 0.3451 0.5712 0.5920 0.6059
#> x6~~x6          0.3562 0.0415 100 0.2442 0.2546 0.2717 0.4303 0.4440 0.4444
#> x7~~x7          0.7994 0.0806 100 0.6236 0.6321 0.6587 0.9455 1.0475 1.0698
#> x8~~x8          0.4877 0.0755 100 0.2858 0.3163 0.3570 0.6501 0.6735 0.6880
#> x9~~x9          0.5661 0.0652 100 0.3270 0.3676 0.4368 0.6843 0.7001 0.7114
#> visual~~visual  0.8093 0.1566 100 0.4745 0.4779 0.5262 1.1124 1.1807 1.2061
#> textual~~textual 0.9795 0.1147 100 0.6911 0.6990 0.7551 1.1753 1.2905 1.3271
#> speed~~speed    0.3837 0.0784 100 0.1327 0.1641 0.2342 0.5296 0.5426 0.5508
#> visual~~textual 0.4082 0.0724 100 0.2519 0.2534 0.2836 0.5375 0.5721 0.5797
#> visual~~speed   0.2622 0.0528 100 0.1368 0.1480 0.1741 0.3683 0.3828 0.3861
#> textual~~speed   0.1735 0.0500 100 0.0184 0.0546 0.0983 0.2720 0.2897 0.3006
#> Standardized Monte Carlo Confidence Intervals
#>      est      se    R 0.05% 0.5% 2.5% 97.5% 99.5% 99.95%
#> visual=~x1      0.7719 0.0532 100 0.5976 0.6230 0.6590 0.8547 0.8937 0.8948
#> visual=~x2      0.4236 0.0626 100 0.2500 0.2668 0.2913 0.5503 0.5802 0.5872
#> visual=~x3      0.5811 0.0540 100 0.4375 0.4383 0.4597 0.6855 0.7033 0.7121
#> textual=~x4      0.8516 0.0237 100 0.7928 0.7944 0.8017 0.8878 0.9046 0.9134
#> textual=~x5      0.8551 0.0258 100 0.7690 0.7817 0.8017 0.8979 0.9005 0.9008
#> textual=~x6      0.8380 0.0220 100 0.7641 0.7698 0.7927 0.8721 0.8807 0.8817
#> speed=~x7       0.5695 0.0567 100 0.3147 0.3536 0.4596 0.6419 0.6816 0.6884
#> speed=~x8       0.7230 0.0504 100 0.5728 0.5748 0.5882 0.7991 0.8082 0.8116
#> speed=~x9       0.6650 0.0518 100 0.4930 0.5143 0.5457 0.7552 0.7779 0.7805
#> x1~~x1          0.4042 0.0806 100 0.1993 0.2012 0.2695 0.5658 0.6111 0.6427
#> x2~~x2          0.8206 0.0528 100 0.6552 0.6633 0.6972 0.9151 0.9285 0.9375
#> x3~~x3          0.6623 0.0623 100 0.4930 0.5052 0.5301 0.7885 0.8079 0.8086
#> x4~~x4          0.2748 0.0402 100 0.1657 0.1817 0.2118 0.3572 0.3689 0.3714
#> x5~~x5          0.2689 0.0437 100 0.1885 0.1891 0.1937 0.3572 0.3887 0.4086
#> x6~~x6          0.2977 0.0367 100 0.2226 0.2243 0.2394 0.3717 0.4073 0.4162
#> x7~~x7          0.6757 0.0606 100 0.5261 0.5353 0.5879 0.7888 0.8731 0.9006
#> x8~~x8          0.4772 0.0704 100 0.3413 0.3468 0.3614 0.6540 0.6696 0.6719
#> x9~~x9          0.5578 0.0673 100 0.3908 0.3948 0.4297 0.7022 0.7350 0.7569
#> 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 0.0703 100 0.2984 0.3062 0.3458 0.6062 0.6615 0.6637

```

```

#> visual~~speed      0.4705 0.0844 100 0.2921 0.2981 0.3094 0.6454 0.6656 0.6670
#> textual~~speed     0.2830 0.0724 100 0.1137 0.1266 0.1507 0.4264 0.4437 0.4504
#> Standardized Monte Carlo Confidence Intervals
#>           est      se    R  0.05%   0.5%   2.5%  97.5%  99.5% 99.95%
#> visual=~x1      0.7719 0.0610 100 0.6069 0.6120 0.6421 0.8906 0.9209 0.9221
#> visual=~x2      0.4236 0.0625 100 0.2157 0.2200 0.2806 0.5455 0.5680 0.5685
#> visual=~x3      0.5811 0.0625 100 0.3004 0.3442 0.4381 0.6517 0.6662 0.6701
#> textual=~x4      0.8516 0.0234 100 0.7885 0.7897 0.8025 0.8874 0.9043 0.9130
#> textual=~x5      0.8551 0.0218 100 0.7918 0.7929 0.8018 0.8856 0.8993 0.9045
#> textual=~x6      0.8380 0.0234 100 0.7748 0.7766 0.7971 0.8852 0.8904 0.8915
#> speed=~x7       0.5695 0.0533 100 0.3529 0.3969 0.4532 0.6496 0.6621 0.6674
#> speed=~x8       0.7230 0.0511 100 0.5945 0.5964 0.6124 0.8149 0.8171 0.8181
#> speed=~x9       0.6650 0.0498 100 0.5282 0.5508 0.5807 0.7518 0.7936 0.8123
#> x1~~x1          0.4042 0.0938 100 0.1497 0.1519 0.2068 0.5875 0.6254 0.6317
#> x2~~x2          0.8206 0.0514 100 0.6768 0.6773 0.7025 0.9209 0.9516 0.9535
#> x3~~x3          0.6623 0.0665 100 0.5509 0.5562 0.5752 0.8072 0.8791 0.9093
#> x4~~x4          0.2748 0.0395 100 0.1663 0.1822 0.2124 0.3560 0.3763 0.3783
#> x5~~x5          0.2689 0.0370 100 0.1819 0.1911 0.2157 0.3572 0.3713 0.3730
#> x6~~x6          0.2977 0.0392 100 0.2052 0.2072 0.2165 0.3646 0.3969 0.3997
#> x7~~x7          0.6757 0.0579 100 0.5546 0.5616 0.5780 0.7946 0.8401 0.8750
#> x8~~x8          0.4772 0.0730 100 0.3307 0.3323 0.3359 0.6250 0.6443 0.6466
#> x9~~x9          0.5578 0.0665 100 0.3401 0.3697 0.4348 0.6628 0.6960 0.7209
#> 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 0.0566 100 0.3183 0.3257 0.3461 0.5577 0.5782 0.5803
#> visual~~speed     0.4705 0.0762 100 0.2804 0.2901 0.3417 0.6249 0.6431 0.6441
#> textual~~speed    0.2830 0.0741 100 0.0358 0.0984 0.1786 0.4111 0.4650 0.4973
#> Monte Carlo Confidence Intervals
#> Monte Carlo Confidence Intervals (Multiple Imputation Estimates)
#> Standardized Monte Carlo Confidence Intervals
#> Standardized Monte Carlo Confidence Intervals

#> test-semmcci-npd

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

#> test-semmcci-zzz-coverage
#> test-semmcci-zzz-heywood

#> lavaan 0.6-18 ended normally after 18 iterations
#>
#> Estimator ML
#> Optimization method NLMINB

```

```

#>   Number of model parameters           8
#>
#>   Number of observations           50
#>
#> Model Test User Model:
#>
#>   Test statistic           0.000
#>   Degrees of freedom           2
#>   P-value (Chi-square)       1.000
#>
#> Parameter Estimates:
#>
#>   Standard errors           Standard
#>   Information               Expected
#>   Information saturated (h1) model   Structured
#>
#> Latent Variables:
#>
#>           Estimate Std.Err z-value P(>|z|)
#>   eta1 =~
#>     y1           1.000
#>     y2           0.991    0.152    6.524    0.000
#>     y3           0.901    0.138    6.537    0.000
#>     y4           1.399    0.143    9.814    0.000
#>
#> Variances:
#>
#>           Estimate Std.Err z-value P(>|z|)
#>   .y1           0.000    0.055    0.000    1.000
#>   .y2           0.980    0.203    4.822    0.000
#>   .y3           0.807    0.167    4.820    0.000
#>   .y4           0.696    0.176    3.960    0.000
#>   eta1          0.980    0.204    4.815    0.000
#>
#> Standardized Monte Carlo Confidence Intervals
#>
#>           est se R 0.05% 0.5% 2.5% 97.5% 99.5% 99.95%
#> eta1=~y1  1.0000 NA 0    NA    NA    NA    NA    NA    NA
#> eta1=~y2  0.7039 NA 0    NA    NA    NA    NA    NA    NA
#> eta1=~y3  0.7047 NA 0    NA    NA    NA    NA    NA    NA
#> eta1=~y4  0.8566 NA 0    NA    NA    NA    NA    NA    NA
#> y1~~y1    0.0000 NA 0    NA    NA    NA    NA    NA    NA
#> y2~~y2    0.5045 NA 0    NA    NA    NA    NA    NA    NA
#> y3~~y3    0.5034 NA 0    NA    NA    NA    NA    NA    NA
#> y4~~y4    0.2662 NA 0    NA    NA    NA    NA    NA    NA
#> eta1~~eta1 1.0000 NA 0    NA    NA    NA    NA    NA    NA
#> [[1]]
#> [[1]][[1]]
#> [[1]][[1]]$value

```

```

#> [[1]][[1]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[1]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[2]]
#> [[1]][[2]]$value
#> [[1]][[2]]$value[[1]]
#>
#>          est      se      R    0.05%    0.5%    2.5%  97.5%  99.5% 99.95%
#> x * m -0.0016 0.003 2000 -0.0168 -0.0116 -0.0086 0.0038 0.0062 0.008
#>
#>
#> [[1]][[2]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[3]]
#> [[1]][[3]]$value
#> [[1]][[3]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[3]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[4]]
#> [[1]][[4]]$value
#> [[1]][[4]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[4]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[5]]
#> [[1]][[5]]$value
#> [[1]][[5]]$value[[1]]
#> [1] TRUE
#>
#>
#>

```



```

#> alien71=~powerless71      1.0373   1.0780   1.1206
#> alien71~alien67           0.7066   0.7385   0.7714
#> alien71~ses               -0.1244  -0.0930  -0.0521
#> alien67~ses               -0.4637  -0.4320  -0.3973
#> anomia67~~anomia71        2.2408   2.4353   2.6735
#> powerless67~~powerless71   0.8539   1.0129   1.1764
#> education~~education      3.7744   4.1099   4.4386
#> sei~~sei                  300.1256  311.1796  323.1749
#> anomia67~~anomia67        5.6241   5.9246   6.2170
#> powerless67~~powerless67   3.3491   3.5918   3.9050
#> anomia71~~anomia71        5.3957   5.7308   6.0850
#> powerless71~~powerless71   3.9285   4.2147   4.4838
#> ses~~ses                  8.0800   8.4990   8.8589
#> alien67~~alien67          5.7499   6.0373   6.4013
#> alien71~~alien71          4.8720   5.1560   5.4513
#>
#>
#> [[1]][[7]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[8]]
#> [[1]][[8]]$value
#> [[1]][[8]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[8]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[9]]
#> [[1]][[9]]$value
#> [[1]][[9]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[9]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[10]]
#> [[1]][[10]]$value
#> [[1]][[10]]$value[[1]]
#> [1] TRUE
#>

```

```

#>
#> [[1]][[10]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[11]]
#> [[1]][[11]]$value
#> [[1]][[11]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[11]]$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]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[13]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[14]]
#> [[1]][[14]]$value
#> [[1]][[14]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[14]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[15]]

```

```

#> [[1]][[15]]$value
#> [[1]][[15]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[15]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[16]]
#> [[1]][[16]]$value
#> [[1]][[16]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[16]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[17]]
#> [[1]][[17]]$value
#> [[1]][[17]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[17]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[18]]
#> [[1]][[18]]$value
#> [[1]][[18]]$value[[1]]
#> [1] TRUE
#>
#>
#> [[1]][[18]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[19]]
#> [[1]][[19]]$value
#> [[1]][[19]]$value[[1]]
#> [1] TRUE
#>
#>
#>

```

```

#> [[1]][[19]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[20]]
#> [[1]][[20]]$value
#> [[1]][[20]]$value[[1]]
#>
#>
#> 2.5 % 97.5 %
#> visual=~x1 0.6420550 0.8905828
#> visual=~x2 0.2805691 0.5454672
#> visual=~x3 0.4381215 0.6517292
#> textual=~x4 0.8025033 0.8874283
#> textual=~x5 0.8017605 0.8856330
#> textual=~x6 0.7971373 0.8851563
#> speed=~x7 0.4532090 0.6495836
#> speed=~x8 0.6123562 0.8149249
#> speed=~x9 0.5807283 0.7517920
#> x1~~x1 0.2068314 0.5874893
#> x2~~x2 0.7024550 0.9208880
#> x3~~x3 0.5752490 0.8071817
#> x4~~x4 0.2124433 0.3559868
#> x5~~x5 0.2156542 0.3571661
#> x6~~x6 0.2164959 0.3645676
#> x7~~x7 0.5780244 0.7945894
#> x8~~x8 0.3358974 0.6249553
#> x9~~x9 0.4348001 0.6627511
#> visual~~visual 1.0000000 1.0000000
#> textual~~textual 1.0000000 1.0000000
#> speed~~speed 1.0000000 1.0000000
#> visual~~textual 0.3461207 0.5577182
#> visual~~speed 0.3417283 0.6249328
#> textual~~speed 0.1785621 0.4110934
#>
#>
#> [[1]][[20]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[21]]
#> [[1]][[21]]$value
#> [[1]][[21]]$value[[1]]
#> [[1]][[21]]$value[[1]]$thetahatstar
#>
#> y1 y2 y3
#> [1,] -4.246806e-01 -0.5674344544 -0.844470405
#> [2,] 1.285923e+00 1.3721426626 2.365001749

```

```

#> [3,] 1.163091e-01 -1.0861272136 -0.457720098
#> [4,] -3.702629e-01 0.0087967812 -0.456828435
#> [5,] 1.718771e-01 0.4957076624 0.489424273
#> [6,] -3.411976e-02 0.9067666709 0.460670898
#> [7,] 9.358973e-01 0.8692087206 1.649419308
#> [8,] 2.606123e-01 -0.7845996957 -0.110441820
#> [9,] 3.114685e-01 -0.0535844114 0.358657813
#> [10,] 9.897516e-01 0.5705621874 1.550838124
#> [11,] -1.526909e+00 -1.4936898671 -2.732960029
#> [12,] 1.092488e+00 0.8953888500 1.859214133
#> [13,] -1.256035e+00 -1.2760443405 -2.274401072
#> [14,] 2.394827e-01 0.8643377866 0.778301301
#> [15,] -1.821778e-01 -0.5833480251 -0.550905729
#> [16,] 1.567170e+00 1.97444495497 3.049966084
#> [17,] 6.338543e-01 2.4703094599 2.161321764
#> [18,] 1.391986e+00 2.2150786670 2.965053675
#> [19,] -3.775255e-01 -1.3658394759 -1.228750318
#> [20,] -1.665505e-01 -0.3868979388 -0.422397255
#> [21,] -6.810469e-01 -1.2718366106 -1.555067624
#> [22,] 1.574423e+00 1.4567694279 2.771719317
#> [23,] -5.414014e-01 0.3340344021 -0.489741369
#> [24,] 1.067092e+00 3.1023927751 3.052340146
#> [25,] 1.004737e+00 1.2216146971 1.930831486
#> [26,] -6.375036e-02 0.0525931144 -0.050308420
#> [27,] 8.723528e-01 2.5689393198 2.513459921
#> [28,] 1.073842e+00 1.4806232742 2.160742598
#> [29,] 3.228785e-01 0.0111139123 0.408790598
#> [30,] -9.964082e-01 -1.4121892694 -2.026206560
#> [31,] 9.750292e-01 1.7286461249 2.175167703
#> [32,] -2.641183e+00 -5.6837326372 -6.447734615
#> [33,] 1.035778e-01 0.0813528760 0.174306817
#> [34,] -2.909126e-01 -0.5379891968 -0.661323533
#> [35,] 2.373802e+00 3.6007962879 4.958374092
#> [36,] 1.424798e+00 2.4344197578 3.127694820
#> [37,] 1.949218e-01 2.2931584136 1.515670423
#> [38,] 9.535264e-02 0.5650217926 0.432466230
#> [39,] 2.875480e+00 5.1368035275 6.436375300
#> [40,] 9.874190e-01 1.6623678919 2.153835985
#> [41,] 2.795543e+00 6.1613362479 6.905269085
#> [42,] 8.079498e-02 -0.4093790103 -0.126438513
#> [43,] -2.187906e+00 -3.0390072179 -4.414795628
#> [44,] 1.678974e+00 2.9193718438 3.713775208
#> [45,] -2.651958e-01 0.0307554419 -0.313625806
#> [46,] 1.606499e-01 0.2963384546 0.364782531
#> [47,] -1.324144e+00 -1.8681300179 -2.687914663

```

```

#> [48,] 6.344300e-01 1.5371237237 1.644160519
#> [49,] -2.699770e+00 -4.0509676021 -5.614675478
#> [50,] 9.905222e-02 -0.3274457675 -0.058202590
#> [51,] 3.272955e-01 0.5980031453 0.739997499
#> [52,] -8.337031e-01 -2.3033357652 -2.317865663
#> [53,] -4.818745e-02 0.4095994074 0.167221749
#> [54,] 3.361049e-01 1.7334477628 1.381106894
#> [55,] 2.998949e-01 0.1026549873 0.430932101
#> [56,] 5.450611e-01 0.0501875922 0.707532142
#> [57,] 8.746309e-02 -1.4153983649 -0.676422141
#> [58,] 7.552542e-01 1.5836766764 1.820660860
#> [59,] -1.025963e+00 -2.2365345124 -2.520538097
#> [60,] 9.907188e-02 -0.5338005578 -0.172696346
#> [61,] -9.838347e-02 -0.8525640781 -0.595819554
#> [62,] 3.155431e-01 0.0017227112 0.394431784
#> [63,] -1.954378e+00 -5.1369835017 -5.287879945
#> [64,] 1.501999e+00 2.4498420073 3.232521265
#> [65,] -3.457712e-01 -1.6899558612 -1.369024352
#> [66,] -3.318195e+00 -5.5655149109 -7.226348882
#> [67,] 1.642618e+00 2.7951972354 3.599527994
#> [68,] -2.293105e+00 -4.8326848299 -5.541393089
#> [69,] 1.125354e+00 3.0106136085 3.074058286
#> [70,] 3.651434e-02 0.8173336197 0.499118578
#> [71,] 2.894378e-01 -0.2561143782 0.218790334
#> [72,] 7.783488e-01 1.5770565970 1.845785450
#> [73,] -9.790518e-01 -1.8906287698 -2.270077480
#> [74,] 3.601769e-01 1.7163647709 1.401643848
#> [75,] -1.558294e+00 -3.6293568919 -3.957302147
#> [76,] -7.348388e-02 -0.6288763206 -0.440632927
#> [77,] 8.764688e-02 -0.1623914062 0.019173444
#> [78,] -9.891151e-01 -1.0850557136 -1.835566833
#> [79,] -3.655801e-01 -1.3490349707 -1.204528812
#> [80,] -1.368797e+00 -2.6970252112 -3.203597713
#> [81,] -6.587049e-01 -0.6158615716 -1.163168937
#> [82,] 1.661865e+00 2.6976956370 3.569419533
#> [83,] 1.523454e-01 0.8387330721 0.655433386
#> [84,] 5.122381e-02 0.5498720600 0.369031021
#> [85,] 1.279672e+00 3.2563981170 3.402889358
#> [86,] 1.049299e+00 0.6768178926 1.684060197
#> [87,] 2.574452e-01 0.3516376273 0.516173065
#> [88,] 1.857263e-01 0.0538302151 0.261470372
#> [89,] -6.834880e-01 -1.0993424416 -1.462384657
#> [90,] 1.573710e+00 2.4485276826 3.321214380
#> [91,] -2.298735e-01 0.0411480469 -0.263812142
#> [92,] 2.284738e-02 -0.9978945398 -0.525299473

```

```

#> [93,] 9.178086e-01 1.5804506351 2.021572517
#> [94,] 7.582010e-01 0.6021365224 1.279621778
#> [95,] 8.892111e-02 0.0623609583 0.145490528
#> [96,] -1.345773e+00 -1.6758189125 -2.608160733
#> [97,] -7.022393e-01 -0.9639956134 -1.410655248
#> [98,] -3.241345e-01 -0.8927555622 -0.899631110
#> [99,] -1.592216e+00 -2.5465306492 -3.398678583
#> [100,] -1.235637e+00 -0.9412125032 -2.063147423
#> [101,] -7.721154e-01 -1.5473754479 -1.821540720
#> [102,] -1.318354e+00 -2.2232776927 -2.877787163
#> [103,] -1.332118e+00 -3.2392120162 -3.458751575
#> [104,] 1.163599e+00 2.5828514980 2.884358275
#> [105,] -3.680232e-01 -0.9040213164 -0.960611389
#> [106,] 1.392745e+00 2.4089728248 3.073603315
#> [107,] -8.511085e-01 -1.5595808416 -1.926817019
#> [108,] -1.998420e+00 -3.3217859186 -4.335440475
#> [109,] 1.282522e+00 2.1808300360 2.809548056
#> [110,] 1.292492e-01 0.4065028225 0.386763206
#> [111,] 6.601911e-01 -0.4597792488 0.568086649
#> [112,] 2.077097e-01 -0.8048703122 -0.187659551
#> [113,] 2.400029e+00 3.7103095606 5.051853744
#> [114,] -6.012069e-01 -1.6650647180 -1.673733999
#> [115,] 2.703609e+00 3.9186938029 5.546055819
#> [116,] -7.728166e-01 -1.9525422907 -2.047265718
#> [117,] -1.711421e+00 -4.3465462265 -4.546258477
#> [118,] 1.307784e+00 1.6555484862 2.549539666
#> [119,] -3.032432e-01 0.0961820725 -0.324761020
#> [120,] 1.394082e+00 1.1904709896 2.399053597
#> [121,] 1.017682e+00 2.5846551325 2.703404028
#> [122,] 6.947103e-01 0.7668016609 1.291832416
#> [123,] 6.558163e-01 1.9350582392 1.891665887
#> [124,] 9.520668e-01 0.8029117042 1.632790294
#> [125,] 1.080509e+00 2.0107896367 2.463276956
#> [126,] -2.327764e+00 -3.8763618606 -5.053892818
#> [127,] -2.744899e-01 -0.9647413325 -0.877674345
#> [128,] 5.362015e-01 0.5336026653 0.964759527
#> [129,] 1.105121e+00 1.8913800292 2.427700048
#> [130,] 1.324506e+00 2.2285941459 2.888408919
#> [131,] 8.861135e-01 2.5033361888 2.494212271
#> [132,] 8.819398e-01 2.6193017292 2.553363784
#> [133,] -9.555726e-02 -1.2694873580 -0.823670286
#> [134,] 7.348624e-01 1.0000639634 1.471352026
#> [135,] -2.774682e-01 -1.5944426596 -1.230846112
#> [136,] -5.329887e-01 -0.5280684713 -0.957681921
#> [137,] -1.042850e+00 -2.1409758567 -2.488564781

```

```

#> [138,] 1.987515e+00 4.1848343921 4.800798260
#> [139,] 1.082528e+00 1.1237307322 1.973513923
#> [140,] -1.369158e+00 -1.9317011853 -2.779324859
#> [141,] -1.773405e+00 -4.1386283777 -4.508164787
#> [142,] -1.033128e+00 -2.5848280513 -2.722761025
#> [143,] -2.816424e+00 -3.6107902440 -5.515860990
#> [144,] 2.363791e-01 0.8318743513 0.756415366
#> [145,] 9.187832e-01 0.3701867547 1.351142117
#> [146,] -4.730818e-01 -0.8044236036 -1.036344715
#> [147,] -2.795169e+00 -4.6809350051 -6.083242073
#> [148,] 9.074772e-01 1.1263301192 1.756671598
#> [149,] 7.027981e-01 1.8842381009 1.922048167
#> [150,] 4.453580e-01 0.9150729699 1.063179591
#> [151,] -1.369027e+00 -1.6156477119 -2.603766054
#> [152,] -1.418097e+00 -2.3150418199 -3.053089044
#> [153,] 6.608876e-01 0.6488109843 1.184176229
#> [154,] 5.600098e-01 1.3057058038 1.422932904
#> [155,] -1.144720e+00 -2.3862252121 -2.751697899
#> [156,] -1.602339e+00 -2.8563421971 -3.583234609
#> [157,] -1.619794e+00 -2.0673862043 -3.167162491
#> [158,] -2.473715e-01 0.0096865264 -0.303091582
#> [159,] -6.361763e-01 -1.0177376865 -1.358100735
#> [160,] -1.448368e+00 -1.6412250821 -2.716896887
#> [161,] 2.406347e+00 4.1119359026 5.282617687
#> [162,] 1.398565e+00 3.2719748842 3.559790494
#> [163,] -9.227862e-02 -0.4751028056 -0.378731719
#> [164,] -1.708932e+00 -2.7091045144 -3.634442911
#> [165,] -4.559985e-01 0.4693725532 -0.308138654
#> [166,] -2.253622e+00 -4.4515434193 -5.280640470
#> [167,] 1.113106e+00 0.6280225305 1.736546516
#> [168,] -1.217251e+00 -2.4419115981 -2.873046192
#> [169,] -4.938643e-01 -1.9705592141 -1.709416618
#> [170,] 1.793389e+00 3.8983074586 4.399716673
#> [171,] 2.661480e-01 1.2107281599 1.003784518
#> [172,] -1.145682e+00 -2.5990820865 -2.871023974
#> [173,] 6.150889e-01 1.1042720956 1.379828068
#> [174,] 2.410041e+00 3.0303128073 4.686968497
#> [175,] 8.849246e-01 0.8820856995 1.593003513
#> [176,] 1.224204e+00 1.6741328522 2.455630505
#> [177,] -9.759834e-01 -2.1869926168 -2.430720739
#> [178,] -3.110317e+00 -5.8459402041 -7.122754310
#> [179,] 4.570654e-01 0.7580907314 0.990659841
#> [180,] -1.454782e+00 -3.2324907824 -3.607980384
#> [181,] 1.481044e+00 2.7139421393 3.352955445
#> [182,] 1.364860e+00 2.1964623985 2.920897279

```



```

#> [183,] -4.211436e-01 -0.8986566564 -1.023874283
#> [184,] 1.318787e-01 1.1699177899 0.813705388
#> [185,] 8.989654e-01 1.4122401808 1.904725701
#> [186,] -4.029777e-01 -0.3998129592 -0.724384427
#> [187,] -1.988870e+00 -4.5910114767 -5.027899328
#> [188,] -1.177661e-01 -0.2791048555 -0.301743488
#> [189,] 3.380480e-01 0.2763727380 0.574914237
#> [190,] 6.644748e-01 0.6461436793 1.187169235
#> [191,] -2.254166e-01 -0.1589093927 -0.369277979
#> [192,] -1.328241e+00 -0.9128154374 -2.162864143
#> [193,] -1.052798e+00 -0.5873204798 -1.638756326
#> [194,] 6.161067e-01 0.0645647874 0.804103181
#> [195,] -2.886879e-02 0.1054947446 0.022546371
#> [196,] 7.050448e-01 1.6154788808 1.775699568
#> [197,] -1.347606e+00 -2.6189456754 -3.133841865
#> [198,] -2.859314e-01 0.4653734651 -0.098287882
#> [199,] 1.772397e-01 -0.2519759217 0.081178171
#> [200,] 6.208782e-01 0.1051235778 0.832561586
#> [201,] -1.816967e-01 -0.0577651381 -0.258629267
#> [202,] 9.045226e-02 0.0488066975 0.139877792
#> [203,] -3.901156e-01 1.1905772597 0.174254360
#> [204,] 1.264831e+00 2.4620180080 2.943534924
#> [205,] 2.458979e-01 0.2541117744 0.447651102
#> [206,] 1.510236e+00 2.5435382878 3.294790945
#> [207,] 2.285016e+00 3.4311146923 4.753493114
#> [208,] -7.054226e-01 -1.4108212912 -1.662594361
#> [209,] -6.947608e-01 -0.9266899670 -1.380626618
#> [210,] 4.567817e-02 0.3321752279 0.241303094
#> [211,] -5.003589e-01 -1.3506037101 -1.373465876
#> [212,] -6.654979e-01 -2.2378836945 -2.071794122
#> [213,] -4.484275e-01 -0.9605768081 -1.092259799
#> [214,] 1.355855e+00 1.7695192014 2.672732894
#> [215,] -5.862595e-01 -2.4113357088 -2.069243993
#> [216,] -1.449195e+00 -3.1952993978 -3.580373542
#> [217,] 1.198602e-01 0.4266853738 0.386255692
#> [218,] -1.492266e+00 -2.4745823835 -3.234114747
#> [219,] 1.193678e+00 3.6992418305 3.541416926
#> [220,] 4.234361e-01 0.8580646476 1.004206158
#> [221,] 8.249953e-01 1.7532846346 2.001751828
#> [222,] -1.674403e+00 -2.7118157212 -3.592890150
#> [223,] 1.837502e+00 3.5902555692 4.283769027
#> [224,] -4.151013e-02 0.0363436358 -0.031593084
#> [225,] 1.296065e+00 1.9552063591 2.701223805
#> [226,] -1.178542e+00 -0.9415400868 -1.992133762
#> [227,] 4.253631e-01 1.7928206959 1.525359563

```

```

#> [228,] -1.002814e+00 -2.6492514055 -2.720712828
#> [229,] -3.384915e+00 -4.9556958783 -6.971123804
#> [230,] 1.621955e+00 1.8924498522 3.072774701
#> [231,] 1.914679e+00 2.7071160456 3.889901473
#> [232,] 5.847866e-01 -0.1481836620 0.646981198
#> [233,] -2.083926e+00 -4.6790469908 -5.195288405
#> [234,] 1.694159e-01 -0.4270757282 -0.025750995
#> [235,] 1.429179e+00 1.8255601371 2.795265929
#> [236,] -4.531221e-01 -0.4303542800 -0.803862586
#> [237,] 2.815940e+00 5.4500553943 6.535972423
#> [238,] 3.341308e-01 -0.2804798626 0.260999763
#> [239,] 5.044355e-01 0.6073959329 0.966100049
#> [240,] -1.244952e-01 -1.1252376526 -0.779702794
#> [241,] 1.120664e+00 2.0480526055 2.534028184
#> [242,] 1.037678e+00 0.7754242654 1.724291363
#> [243,] -6.577987e-01 0.1227101222 -0.752162541
#> [244,] -5.114840e-01 -1.8149096681 -1.645008955
#> [245,] -1.749432e+00 -2.5839257110 -3.615475993
#> [246,] -1.073982e+00 -3.3416287001 -3.193698119
#> [247,] -2.594006e-01 -1.6147424149 -1.219581750
#> [248,] 1.731469e+00 4.4095762247 4.606237334
#> [249,] 7.698501e-01 1.1434156804 1.594535215
#> [250,] -9.129205e-01 -2.9256679946 -2.762016476
#> [251,] -3.685821e-02 0.2486917757 0.092052087
#> [252,] 3.208647e-01 0.8623942673 0.878704479
#> [253,] 7.060893e-01 1.5187783839 1.723337336
#> [254,] 9.022233e-01 0.5445810156 1.427273744
#> [255,] 1.307544e+00 2.0282582536 2.756079379
#> [256,] -1.585647e+00 -2.4733948964 -3.349900403
#> [257,] -3.304513e-01 -1.1918990309 -1.073520081
#> [258,] 1.287027e-01 -0.4303461014 -0.078334470
#> [259,] -8.033191e-02 0.2479129051 0.037409029
#> [260,] 1.057272e+00 2.0886482819 2.477509074
#> [261,] -1.186372e+00 -1.9610641278 -2.567690187
#> [262,] -1.211253e+00 -3.4176134200 -3.407039570
#> [263,] 1.238622e+00 2.6477816127 3.013943777
#> [264,] 1.542581e+00 3.0290144201 3.604543317
#> [265,] -8.419891e-01 -1.7182805603 -2.003516974
#> [266,] 5.306447e-01 1.7598006602 1.638318764
#> [267,] 1.387433e+00 1.4186980367 2.517419097
#> [268,] -1.775599e+00 -2.7968149017 -3.766250649
#> [269,] 1.398181e+00 3.8436245299 3.876554186
#> [270,] -2.237111e-01 -1.7047289138 -1.225016320
#> [271,] 7.843735e-01 1.8437127098 2.001281117
#> [272,] 1.762544e+00 2.9645521398 3.843058304

```

```

#> [273,] 5.606780e-02 0.1130437372 0.132649942
#> [274,] 1.381850e+00 1.4877934058 2.548801254
#> [275,] 1.460565e-01 0.3640172065 0.384143775
#> [276,] 6.535229e-01 0.6082709528 1.152494600
#> [277,] -8.930168e-01 -2.8041738706 -2.669772796
#> [278,] -7.750894e-01 -0.3046672691 -1.135598210
#> [279,] 9.999138e-02 0.6100897707 0.463261494
#> [280,] -1.080194e+00 -2.5715245054 -2.774068304
#> [281,] 3.974753e-01 1.5593575479 1.361021707
#> [282,] -1.419821e+00 -2.9795510207 -3.424014250
#> [283,] -6.240222e-01 -1.1024522084 -1.389957749
#> [284,] -1.258610e+00 -2.2947116010 -2.842930290
#> [285,] 9.884359e-01 0.1129884009 1.295263294
#> [286,] 5.787459e-01 1.1576171434 1.364113338
#> [287,] 4.639068e-01 0.9383483803 1.099226327
#> [288,] 1.202981e+00 1.9369697057 2.575029414
#> [289,] 1.030020e+00 2.3384963776 2.582180915
#> [290,] -1.476436e+00 -2.2771431813 -3.104804141
#> [291,] -3.144019e-01 -0.1485422302 -0.474487443
#> [292,] 1.271484e+00 1.3644497622 2.342727107
#> [293,] 1.022487e+00 2.7057262636 2.776585121
#> [294,] -1.149246e+00 -2.1267042058 -2.613317684
#> [295,] 9.345230e-01 1.1958337060 1.828968777
#> [296,] 3.967343e-02 1.1957108746 0.713041432
#> [297,] -1.045082e+00 -1.5289709236 -2.151711274
#> [298,] 1.079336e+00 1.6045722195 2.236380574
#> [299,] 8.050643e-01 1.9271587899 2.073391240
#> [300,] -3.450188e+00 -4.9458426450 -7.047049475
#> [301,] 1.082774e+00 2.7736043171 2.889431597
#> [302,] 8.069950e-01 1.4438694260 1.807593337
#> [303,] -2.331103e+00 -3.3225268550 -4.750700606
#> [304,] -2.099421e+00 -3.2959864852 -4.447069592
#> [305,] -2.458133e-01 -1.5088842136 -1.143891730
#> [306,] -3.457547e-01 -0.6339546601 -0.782967345
#> [307,] 7.230310e-01 1.9095063914 1.961300975
#> [308,] -1.167689e+00 -3.0747486482 -3.162441140
#> [309,] 1.860355e-01 0.7226897818 0.633045012
#> [310,] -1.429726e+00 -2.4743806649 -3.156016623
#> [311,] 5.972889e-01 0.2690434782 0.894114923
#> [312,] 5.775402e-01 1.2978499394 1.440433257
#> [313,] 8.513408e-01 1.7659145331 2.041613192
#> [314,] -6.571895e-01 -1.0314055094 -1.391888819
#> [315,] 1.795689e+00 2.4440365433 3.595525655
#> [316,] -4.550082e-01 0.2638785765 -0.420944403
#> [317,] 1.897880e+00 4.4557692022 4.839382925

```

```

#> [318,] -1.290659e+00 -2.3291607678 -2.902012093
#> [319,] -5.113445e-01  0.4285307078 -0.399819578
#> [320,] -2.607324e+00 -4.4891183649 -5.742551986
#> [321,]  7.349289e-01  1.7548198322  1.890292902
#> [322,] -8.325331e-01 -1.7146813834 -1.989728164
#> [323,] -1.201606e+00 -1.5698046614 -2.369553773
#> [324,]  2.177712e-01  0.6457123286  0.629899578
#> [325,] -3.757530e-01  0.1477614104 -0.386554914
#> [326,]  2.653353e-01 -1.4145413601 -0.454143477
#> [327,] -1.949566e-01 -0.9077168867 -0.746851792
#> [328,] -2.610929e+00 -3.9776310786 -5.463194366
#> [329,] -1.242456e+00 -1.6627671005 -2.472083585
#> [330,]  7.987462e-01  1.1105149020  1.612309539
#> [331,]  2.875491e-01  0.8944209066  0.854934068
#> [332,] -5.698895e-01  0.2097579004 -0.594233689
#> [333,] -1.530060e+00 -1.3855954342 -2.676900945
#> [334,] -5.127473e-01 -0.7850768085 -1.075070150
#> [335,] -5.693971e-01 -1.4195694985 -1.497828175
#> [336,] -1.608668e+00 -2.4552166804 -3.368518654
#> [337,] -7.119393e-01  0.0329635278 -0.869480364
#> [338,] -2.082414e+00 -2.6671345458 -4.076875733
#> [339,]  1.879126e+00  3.0752598162  4.049872569
#> [340,]  1.098550e+00  2.2278483455  2.606232589
#> [341,]  5.666963e-01  2.3940590309  2.035261279
#> [342,]  1.286339e+00  1.5934441807  2.488333161
#> [343,] -2.011508e+00 -3.1282856430 -4.244377171
#> [344,]  1.587935e+00  1.3420220539  2.724889107
#> [345,]  2.327699e-01  1.4860845049  1.114973989
#> [346,]  4.359267e-02  0.0302542976  0.071149039
#> [347,]  1.057871e+00  2.7733822105  2.858254046
#> [348,] -5.730480e-01 -0.8230211019 -1.171321365
#> [349,] -5.815129e-01 -1.3620328322 -1.481005963
#> [350,]  7.204915e-01  0.7251149248  1.300846652
#> [351,] -2.628315e+00 -4.3220271124 -5.675998956
#> [352,] -1.111385e+00 -1.8577399053 -2.416841802
#> [353,] -1.084310e+00 -0.3151388000 -1.527001158
#> [354,]  6.603631e-01  1.2433729609  1.513479228
#> [355,] -5.475071e-02 -0.0783184908 -0.111736506
#> [356,] -1.024164e+00 -2.9380043629 -2.907580502
#> [357,]  1.087002e-01  0.5711306494  0.452500566
#> [358,] -1.108163e+00 -1.4750292207 -2.200436122
#> [359,]  1.225729e-01 -0.2387862477  0.020329593
#> [360,] -1.710611e+00 -3.3555419747 -3.995281938
#> [361,] -7.596734e-01 -0.4560618274 -1.200392472
#> [362,]  6.001834e-01  1.8749639923  1.788942921

```

```

#> [363,] -1.323369e+00 -2.5521933964 -3.066574763
#> [364,] -7.464273e-02 -0.4676334835 -0.352594966
#> [365,] 2.015797e-01 0.5982515339 0.583370364
#> [366,] 1.176001e+00 1.3795488981 2.232041290
#> [367,] 7.695475e-01 1.6704285117 1.886627929
#> [368,] 1.520012e-01 -0.4431520317 -0.056388457
#> [369,] 1.263759e+00 2.2539486662 2.826728266
#> [370,] -3.826511e-01 -0.8416026047 -0.944212338
#> [371,] 3.598983e-01 0.3670796113 0.652499651
#> [372,] 2.759289e+00 5.1766721931 6.313612905
#> [373,] -4.732159e-02 -0.1119845159 -0.121155771
#> [374,] 5.454117e-01 1.4180472845 1.467074105
#> [375,] 4.227135e-01 0.5666704398 0.841593466
#> [376,] -2.034734e+00 -3.4926599711 -4.475552188
#> [377,] 1.122141e+00 2.2023228627 2.621483571
#> [378,] -1.373060e-01 -0.9715667732 -0.710396710
#> [379,] -5.463803e-01 -0.9978681868 -1.235100179
#> [380,] 9.380214e-01 0.6373283686 1.523384119
#> [381,] -1.363441e+00 -2.3658273670 -3.013118432
#> [382,] -3.028178e-01 -0.6225848272 -0.723116176
#> [383,] -1.842901e+00 -2.5936776431 -3.737442783
#> [384,] 1.126749e+00 2.2856281665 2.673460449
#> [385,] -1.964438e-01 0.6729443125 0.128494539
#> [386,] -7.723812e-01 -1.3349536409 -1.703986937
#> [387,] -5.574953e-01 -1.2054686306 -1.364169947
#> [388,] -7.512733e-01 -1.3938202823 -1.710334418
#> [389,] 9.289547e-01 0.9775132890 1.700866491
#> [390,] -1.374355e+00 -2.6163681022 -3.165767289
#> [391,] 4.976092e-01 0.9086096657 1.124748872
#> [392,] 1.343191e-01 0.8783045336 0.654915369
#> [393,] 1.200043e+00 2.1850707311 2.709051684
#> [394,] 1.152207e+00 3.1943632701 3.209515926
#> [395,] 1.371047e+00 2.2962043740 2.983964588
#> [396,] -1.797882e+00 -2.7598015788 -3.773496681
#> [397,] 1.148224e+00 1.7287956726 2.391220547
#> [398,] 1.498299e+00 2.0487912199 3.005342028
#> [399,] -7.845531e-02 0.6835179304 0.281491665
#> [400,] 1.083339e-01 -1.3323294851 -0.604296903
#> [401,] -8.338342e-01 -1.8316363263 -2.056255767
#> [402,] 1.003442e+00 1.8853499768 2.297561590
#> [403,] 1.751121e+00 2.6615345480 3.660652544
#> [404,] 1.189654e+00 2.8146392469 3.045481098
#> [405,] 7.454548e-01 1.4797412709 1.750761435
#> [406,] 1.763211e+00 2.9868663408 3.856273629
#> [407,] -4.855691e-01 -0.7483539755 -1.020799932

```

```

#> [408,] 2.705165e-01 -0.5636035313 0.024552189
#> [409,] -7.193748e-01 -2.2810937018 -2.162957146
#> [410,] -5.607370e-01 0.2725129581 -0.547994345
#> [411,] 3.207629e-01 0.2897895171 0.560805846
#> [412,] -9.393884e-01 -1.1002618605 -1.781997455
#> [413,] 6.853514e-01 1.1226502753 1.477643103
#> [414,] -3.368495e+00 -6.1873446552 -7.634162239
#> [415,] 1.984390e+00 3.5982156092 4.471353159
#> [416,] 2.874001e-01 0.2140213543 0.477155009
#> [417,] -4.913366e-01 -1.3538201645 -1.364000194
#> [418,] 1.041133e+00 3.8996221844 3.462398909
#> [419,] -8.376323e-01 -1.0547020768 -1.629825896
#> [420,] 3.487352e-01 -0.3310059354 0.251171193
#> [421,] -5.387466e-01 -0.6331308273 -1.023167114
#> [422,] 1.500281e+00 4.1077972290 4.150475440
#> [423,] -4.949809e-01 -1.6132837738 -1.512536080
#> [424,] 2.628632e-01 0.9143125619 0.835190299
#> [425,] -1.803949e+00 -1.8997205319 -3.303753425
#> [426,] 2.701015e+00 3.8814517541 5.522154161
#> [427,] 2.311816e+00 4.6383506196 5.456878394
#> [428,] 1.522086e-01 0.2845447163 0.347711445
#> [429,] 2.414300e+00 3.9078639202 5.179284252
#> [430,] 4.906585e-01 1.0084861225 1.171508771
#> [431,] 3.959355e-01 0.4664516923 0.752584630
#> [432,] -9.841052e-01 -1.5765240455 -2.102063973
#> [433,] -5.982263e-01 0.5634633977 -0.433277412
#> [434,] -5.882698e-01 -2.2062720704 -1.957949024
#> [435,] -1.159828e+00 -2.5355599120 -2.853411811
#> [436,] 2.789932e-01 -0.5725481048 0.030158622
#> [437,] -7.843063e-01 -2.0343950663 -2.107018076
#> [438,] 2.483055e+00 2.3192429050 4.383401237
#> [439,] 1.389679e+00 3.2010235804 3.509335827
#> [440,] 1.344907e+00 1.9612557636 2.765487011
#> [441,] -2.090071e-01 -2.0019497054 -1.371625884
#> [442,] -3.873373e-01 -0.1739054614 -0.579511981
#> [443,] -8.677384e-02 -0.5394441481 -0.407574127
#> [444,] -1.771697e-01 -0.0680481724 -0.258690890
#> [445,] 1.947972e-01 -0.5190673851 -0.045152552
#> [446,] 1.268705e+00 2.5324974554 2.987478817
#> [447,] 1.529376e+00 3.1818164585 3.672875090
#> [448,] 1.069182e+00 2.7746637275 2.873070698
#> [449,] 4.847351e-01 -0.3200358753 0.426848238
#> [450,] -4.602144e-01 -1.2015293593 -1.240676426
#> [451,] -3.173741e-01 0.0115810913 -0.389332009
#> [452,] -2.543815e+00 -5.5216820347 -6.236387307

```

```

#> [453,] 2.642460e+00 3.8988733254 5.458804615
#> [454,] 9.985624e-01 1.3910321227 2.017151528
#> [455,] -3.117524e-01 -0.6556762468 -0.752621747
#> [456,] 5.390686e-01 2.0228602580 1.794810322
#> [457,] -3.748249e-01 -0.8642627699 -0.947028668
#> [458,] 2.291644e-01 -0.4596544972 0.030674324
#> [459,] 5.047403e-01 0.7625284629 1.052572267
#> [460,] 1.528882e+00 1.9762518839 3.003222336
#> [461,] -9.588625e-01 -1.4711807505 -2.012125686
#> [462,] -1.579543e+00 -2.0489658513 -3.106747638
#> [463,] 2.041794e+00 1.3624183371 3.302160966
#> [464,] -9.926123e-01 -2.1841591004 -2.449884187
#> [465,] -9.995223e-02 -1.0105287199 -0.685439522
#> [466,] -1.403739e+00 -0.9797816865 -2.294171661
#> [467,] -6.835130e-01 -1.8996407491 -1.906547894
#> [468,] 8.361766e-01 0.2968571808 1.207438428
#> [469,] -7.941422e-01 -0.2999987532 -1.156765886
#> [470,] -8.051587e-01 0.4255642629 -0.767846161
#> [471,] 1.621326e+00 2.7419751049 3.543441902
#> [472,] -3.612284e-01 -0.5045939202 -0.730472943
#> [473,] 1.169627e+00 3.1903287833 3.228999694
#> [474,] -7.217611e-01 -1.4972795342 -1.730948856
#> [475,] 1.352979e+00 0.8958181892 2.184278330
#> [476,] 6.790815e-01 -0.1478932045 0.764726276
#> [477,] 8.794292e-02 0.4844702238 0.378523714
#> [478,] -7.143593e-01 -0.7296734738 -1.295729647
#> [479,] -1.138444e+00 -2.8465929050 -2.999355881
#> [480,] 2.269199e+00 4.0928627434 5.101011914
#> [481,] -5.948695e-01 -1.0141792881 -1.304617133
#> [482,] 2.944870e+00 5.6342504170 6.798965490
#> [483,] 1.223050e+00 1.4451631251 2.327123712
#> [484,] 2.319145e-01 1.7272737200 1.247757213
#> [485,] 6.447284e-01 1.7791209655 1.791300812
#> [486,] 4.061922e-01 0.6388227423 0.861033282
#> [487,] -8.001661e-01 -0.7265734862 -1.401008688
#> [488,] -4.784718e-01 -0.2143442509 -0.715596629
#> [489,] 7.973430e-01 -0.0638297228 0.958847599
#> [490,] 1.792874e+00 1.6960521958 3.176915759
#> [491,] 7.981530e-03 -1.0803658705 -0.589605021
#> [492,] -9.344811e-01 -1.3042138396 -1.889062987
#> [493,] 9.233330e-01 0.6819909128 1.529853770
#> [494,] -1.567386e+00 -1.9370155117 -3.029460400
#> [495,] 2.000191e+00 4.5209852296 5.003155241
#> [496,] 2.169719e+00 3.4808928487 4.637345143
#> [497,] -9.471912e-01 -1.9482200508 -2.262308697

```

```

#> [498,] -1.766563e+00 -2.9072621738 -3.816277117
#> [499,] 2.159106e-01 0.3523782511 0.464791290
#> [500,] -1.224553e+00 -2.6826948893 -3.015776514
#> [501,] -9.459677e-01 -2.4520065900 -2.540363467
#> [502,] 1.481874e+00 2.7794168400 3.390326333
#> [503,] 4.234774e-01 0.6703442388 0.900080703
#> [504,] 1.204963e+00 0.8805141256 1.991212644
#> [505,] 1.376324e+00 2.8861532944 3.317941910
#> [506,] -5.246126e-01 -0.5009228070 -0.932172350
#> [507,] -1.099998e+00 -1.8821878147 -2.416211053
#> [508,] 1.289539e+00 2.0387137574 2.739429907
#> [509,] -1.521857e+00 -1.3381288143 -2.640329895
#> [510,] 3.745548e-01 -0.2242120732 0.342633904
#> [511,] 9.724390e-01 1.1424306975 1.846612759
#> [512,] -1.217808e-01 0.5139389226 0.133356416
#> [513,] 2.452026e+00 4.8862655399 5.769299824
#> [514,] -7.626688e-01 -0.7355853843 -1.359251580
#> [515,] 4.771249e-01 1.7155833744 1.547041913
#> [516,] 7.965203e-01 0.8758454078 1.479302126
#> [517,] 6.888709e-01 0.2931408772 1.021688815
#> [518,] 1.606189e+00 3.1876922514 3.771920398
#> [519,] -2.047902e-01 -1.9138037275 -1.317450185
#> [520,] 4.645923e-01 0.9193064286 1.089513644
#> [521,] 7.925880e-01 0.8932332365 1.484048101
#> [522,] 9.475198e-01 1.2257926694 1.861801476
#> [523,] -6.992478e-02 -1.0472010849 -0.668347527
#> [524,] -3.374031e-01 0.3889970334 -0.204857728
#> [525,] 1.683410e+00 3.0438207319 3.788371511
#> [526,] -1.002781e+00 -3.1837831424 -3.017314226
#> [527,] -5.787773e-01 0.5633506680 -0.409087398
#> [528,] 9.978173e-01 1.6464267081 2.157955761
#> [529,] -8.230118e-01 -0.9715516044 -1.565449380
#> [530,] -1.257308e-01 -0.5741885872 -0.475434336
#> [531,] 2.128813e-01 -1.1786512848 -0.388643532
#> [532,] 5.202040e-01 2.3431854189 1.949053541
#> [533,] -2.068383e+00 -3.9691958240 -4.781968763
#> [534,] 3.952103e-01 0.2882343058 0.652777208
#> [535,] 9.417077e-01 1.9196642493 2.239623521
#> [536,] 4.804950e-01 0.9305974664 1.115610132
#> [537,] 3.631357e-01 0.6788298431 0.829544908
#> [538,] 1.326491e+00 3.3751426554 3.527170199
#> [539,] 1.024412e+00 1.7681919929 2.258692852
#> [540,] -4.708274e-01 -2.5073518663 -1.978587512
#> [541,] -1.080709e+00 -0.3511310644 -1.542485087
#> [542,] -6.713322e-01 -1.1532729220 -1.477155710

```



```

#> [543,] -5.306487e-01 -0.5425429949 -0.962796756
#> [544,] -1.495749e+00 -2.6818321923 -3.353472603
#> [545,] 1.271998e+00 2.6669436551 3.066197139
#> [546,] 1.085499e+00 1.9925141606 2.459357637
#> [547,] 1.569714e+00 2.8192625035 3.521974535
#> [548,] -4.336134e-02 0.2245397188 0.070539435
#> [549,] -1.075463e+00 -1.0767179690 -1.938614353
#> [550,] 1.933561e+00 4.3717887981 4.837270821
#> [551,] 4.824110e-01 0.4872841743 0.871978979
#> [552,] -7.813780e-01 -1.2825702573 -1.686135282
#> [553,] 3.542742e-01 1.6785645259 1.373305726
#> [554,] -1.225964e+00 -1.6263597734 -2.431313716
#> [555,] 1.464052e+00 3.1848058288 3.593077382
#> [556,] -2.484691e+00 -3.5581414838 -5.072978239
#> [557,] -1.043692e+00 -1.7267093436 -2.259713789
#> [558,] 2.915242e+00 5.2968422844 6.574773158
#> [559,] 9.835196e-01 1.2050747935 1.895194979
#> [560,] -1.380117e+00 -2.6639802870 -3.199375632
#> [561,] 1.063627e+00 0.9946761446 1.878325143
#> [562,] 1.753451e+00 2.6873853923 3.677904075
#> [563,] 7.320581e-01 0.1589565403 1.001075784
#> [564,] -9.720330e-01 -1.1502572967 -1.850449977
#> [565,] 1.365559e+00 3.4149172568 3.597960690
#> [566,] 2.068273e-01 0.2488461200 0.396008567
#> [567,] 5.131326e-01 0.8119381144 1.090457527
#> [568,] 2.069895e-01 0.0369398352 0.278611704
#> [569,] -1.037833e+00 -1.9682688561 -2.386463880
#> [570,] 5.647678e-01 1.0590080574 1.291958999
#> [571,] 1.826379e-02 -0.4238190996 -0.212427279
#> [572,] 2.594190e-01 -0.2460965504 0.186916882
#> [573,] 2.444931e-01 -1.0069240750 -0.253922820
#> [574,] -5.901204e-01 -1.2567577812 -1.433316000
#> [575,] -8.332705e-01 -1.5184725774 -1.881759967
#> [576,] -2.895025e-01 -0.0378382698 -0.382002342
#> [577,] 7.279940e-01 0.6397506011 1.262828508
#> [578,] 1.454849e+00 2.2811659845 3.080118145
#> [579,] 6.304343e-03 1.5886148423 0.889476113
#> [580,] 7.656361e-01 1.2987647858 1.675492624
#> [581,] 2.945885e-01 -0.2681832870 0.218515360
#> [582,] 6.540018e-01 0.6743914534 1.189785965
#> [583,] 8.370831e-01 0.7350375817 1.451740623
#> [584,] 1.705272e+00 3.0183603348 3.801503327
#> [585,] 3.746585e-01 1.6965438375 1.408702324
#> [586,] 5.577480e-02 -0.3137239286 -0.104553608
#> [587,] 8.780613e-01 1.4601728044 1.905259277

```

```

#> [588,] -1.675717e+00 -2.6435119306 -3.556623196
#> [589,] -5.393288e-01 -1.5278213741 -1.520408909
#> [590,] 1.047576e+00 2.4819404598 2.683678467
#> [591,] 1.697742e+00 3.9720712281 4.321382626
#> [592,] 3.155712e-01 1.6648200218 1.317416224
#> [593,] 9.951629e-01 1.2126982808 1.913944664
#> [594,] 1.134516e+00 2.5373597403 2.822846697
#> [595,] 1.094999e+00 2.6583186258 2.840696422
#> [596,] 2.033019e+00 3.7012023594 4.589146176
#> [597,] -1.983070e+00 -4.1881476248 -4.797094731
#> [598,] -1.718228e-01 0.6864258048 0.166678088
#> [599,] -3.779768e-02 0.9557055665 0.483243636
#> [600,] -5.857685e-01 1.2942224725 -0.012202114
#> [601,] 1.117055e+00 3.0303312725 3.074651997
#> [602,] 1.499916e+00 1.9898846766 2.974667499
#> [603,] 8.141954e-02 -0.6331123040 -0.249822310
#> [604,] -7.879940e-01 -1.6372014763 -1.891190735
#> [605,] -3.320796e-02 -0.5252405767 -0.332896177
#> [606,] 1.852701e+00 3.3405861177 4.164165299
#> [607,] 1.345779e+00 1.6506301465 2.594189856
#> [608,] 9.187646e-01 2.4564576407 2.508911809
#> [609,] -5.891850e-01 -1.3474496500 -1.482479786
#> [610,] -2.545075e+00 -2.9875928550 -4.831645333
#> [611,] 1.037198e-01 0.3160839896 0.304749871
#> [612,] 1.316737e+00 0.8407059764 2.108500232
#> [613,] -2.591595e+00 -2.6070895352 -4.678491738
#> [614,] -1.006410e+00 -1.5295677561 -2.103818791
#> [615,] 1.664792e+00 3.2584356341 3.884256607
#> [616,] -3.932252e-01 -2.0595856047 -1.633327527
#> [617,] 2.429834e+00 5.1827231979 5.906148148
#> [618,] -1.271183e+00 -2.4208430802 -2.928605367
#> [619,] 1.442285e+00 2.5985471358 3.240585365
#> [620,] -1.252559e+00 -2.3497701647 -2.865939330
#> [621,] -6.196862e-01 0.2045808596 -0.659202226
#> [622,] -2.001478e-01 0.0418322326 -0.226365045
#> [623,] -1.628395e+00 -1.2719436530 -2.736451189
#> [624,] 8.170521e-02 -0.8929225503 -0.393649900
#> [625,] 1.032958e-01 0.7645889088 0.553122541
#> [626,] 1.799704e+00 4.4463766595 4.711747147
#> [627,] -1.076140e+00 -1.4833407874 -2.165116265
#> [628,] -8.618819e-02 -1.0951916832 -0.715260441
#> [629,] 2.554594e-01 0.0351791799 0.338075676
#> [630,] -1.311486e+00 -1.0427173430 -2.214060849
#> [631,] 2.764894e-01 -0.5394988252 0.045377423
#> [632,] -1.771475e+00 -3.1324338119 -3.947362509

```

```

#> [633,] -1.328119e+00 -1.8969004567 -2.708837449
#> [634,] 5.574131e-01 0.1510425385 0.778905109
#> [635,] -9.447200e-01 -1.4389457428 -1.976601205
#> [636,] 1.432411e+00 2.3053663599 3.065569171
#> [637,] -1.401961e+00 -2.8558295277 -3.333082496
#> [638,] -8.314994e-01 -0.4611789492 -1.292797739
#> [639,] -1.218374e+00 -1.1675251426 -2.167215329
#> [640,] -1.623870e-01 -0.2186451069 -0.323832104
#> [641,] -1.301631e-01 -0.7507564204 -0.578949102
#> [642,] -6.862709e-01 0.3359900114 -0.669305400
#> [643,] -1.071250e+00 -3.0781271722 -3.044058186
#> [644,] -1.150437e+00 -2.1493732795 -2.627383960
#> [645,] -2.275723e-01 -1.8019204349 -1.283768369
#> [646,] 2.656802e+00 4.7593734581 5.954230471
#> [647,] 7.814732e-01 1.6301687828 1.879156519
#> [648,] 1.315286e-01 0.4136295303 0.393560556
#> [649,] -1.235078e+00 -2.5027655991 -2.929047759
#> [650,] -4.169904e-01 -1.1092865515 -1.135586107
#> [651,] 2.641836e+00 4.2712814245 5.664698306
#> [652,] -1.021238e+00 -2.3892861272 -2.599417027
#> [653,] 1.703098e-01 0.5751911287 0.531579794
#> [654,] 1.897403e+00 3.0243813953 4.044428359
#> [655,] -6.020426e-01 -1.4237409617 -1.540851510
#> [656,] 4.607927e-01 1.3093763288 1.301248137
#> [657,] -1.149189e+00 -2.1845657616 -2.645358363
#> [658,] -8.485196e-01 -1.0986281938 -1.667779328
#> [659,] 2.811195e-01 -1.4211887197 -0.438149986
#> [660,] 2.950183e-01 0.4310318632 0.607086478
#> [661,] -1.468055e+00 -2.1692121397 -3.034455977
#> [662,] -2.364730e-01 -0.7548882718 -0.713808413
#> [663,] 3.706555e-01 1.3676312962 1.221177964
#> [664,] 9.665911e-01 1.5350875154 2.057228626
#> [665,] 1.948495e+00 4.4022176659 4.872780335
#> [666,] -4.334321e-01 -0.4262608120 -0.777037935
#> [667,] 4.536771e-01 -0.0845090969 0.518827067
#> [668,] 2.125410e+00 3.2992323471 4.481278232
#> [669,] -2.234129e-02 0.4379450398 0.215182032
#> [670,] -1.386709e+00 -2.0890380221 -2.888526234
#> [671,] 6.268797e-01 1.4107406196 1.564608203
#> [672,] 2.675864e+00 3.4931569898 5.275303577
#> [673,] -1.366152e+00 -3.7920751419 -3.808006694
#> [674,] -1.170813e+00 -2.2438320156 -2.705212387
#> [675,] -1.923121e+00 -3.5948678293 -4.393093896
#> [676,] -2.031132e+00 -3.5324602224 -4.493147544
#> [677,] 1.053736e+00 1.2230656293 1.992736959

```

```

#> [678,] -2.325743e+00 -4.4912122347 -5.392588377
#> [679,] 7.588308e-01 1.4815606652 1.768450628
#> [680,] -5.256037e-01 0.2280070128 -0.528882779
#> [681,] 1.294036e+00 2.1617354599 2.813309259
#> [682,] 1.126727e+00 1.1576608260 2.047459086
#> [683,] -8.715230e-01 -1.3729764797 -1.848715876
#> [684,] -1.066705e+00 -2.3018534975 -2.607591335
#> [685,] -6.149632e-02 -0.7122150481 -0.471934185
#> [686,] -1.096101e+00 -1.8815866606 -2.411017079
#> [687,] 3.589084e-01 1.0632929371 1.037634544
#> [688,] -1.682067e+00 -2.0636889754 -3.242764763
#> [689,] 3.938516e-01 -0.1498959378 0.407938973
#> [690,] 4.047843e-01 0.9749749784 1.045828094
#> [691,] -2.754089e+00 -3.7556153734 -5.518502325
#> [692,] 1.028261e+00 0.7891743106 1.720179063
#> [693,] 1.096534e+00 1.9144846902 2.429815003
#> [694,] -1.177607e+00 -2.5900665942 -2.905830270
#> [695,] -1.179084e+00 -2.0199362238 -2.591273606
#> [696,] -2.510210e+00 -4.5482398412 -5.654263701
#> [697,] 1.130428e+00 2.8474165805 2.989817404
#> [698,] -8.054265e-02 -0.8612308559 -0.578382114
#> [699,] -7.956143e-01 -1.8729727184 -2.031536198
#> [700,] 2.033922e+00 3.1203598187 4.267928729
#> [701,] -1.011264e+00 -0.8653150318 -1.741239357
#> [702,] 4.543247e-01 0.8074212816 1.014618618
#> [703,] -1.246260e+00 -2.6048751420 -2.999657700
#> [704,] -1.623240e+00 -2.4397127572 -3.378085013
#> [705,] -2.374271e+00 -2.7638365800 -4.494480897
#> [706,] 2.734011e+00 4.5687292078 5.944709670
#> [707,] 5.080519e-01 1.3986300637 1.409711447
#> [708,] 5.208131e-01 2.8556369939 2.234202275
#> [709,] 2.791099e-01 0.7810938186 0.781518709
#> [710,] 2.098907e-01 0.8020346214 0.706825107
#> [711,] 3.529312e-01 0.5976816825 0.771786329
#> [712,] 6.089309e-02 0.2628888436 0.221824737
#> [713,] 8.693392e-01 1.0876469254 1.687646724
#> [714,] 1.237531e+00 1.0322049242 2.116006783
#> [715,] 5.795976e-01 1.8160683488 1.730588346
#> [716,] 3.334347e-01 1.2125643932 1.088708759
#> [717,] 1.764573e+00 1.7265588657 3.158554721
#> [718,] 1.929530e+00 2.0701926610 3.554955031
#> [719,] 5.650878e-01 1.1752456234 1.356865138
#> [720,] -2.045857e+00 -2.6616558117 -4.028249621
#> [721,] -8.276550e-01 -1.1275509306 -1.657812479
#> [722,] 1.372781e+00 2.7401933442 3.232522719

```

```

#> [723,] -4.690886e-01 -0.5509780105 -0.890713621
#> [724,] 3.187395e-01 -1.0173040991 -0.167099561
#> [725,] 6.180329e-01 0.5269778783 1.063125064
#> [726,] 1.339982e+00 3.1570119433 3.422939460
#> [727,] 6.114565e-01 1.0044065270 1.319877361
#> [728,] -1.799739e-01 0.6862220713 0.156400794
#> [729,] 1.635081e+00 3.6879412573 4.085565548
#> [730,] -2.132277e+00 -2.9490838166 -4.295523483
#> [731,] 4.969909e-01 0.8673698911 1.101091552
#> [732,] -2.275558e-01 -0.2639672980 -0.430248290
#> [733,] -2.261106e+00 -3.3464645314 -4.676700212
#> [734,] 5.175558e-01 0.2286845148 0.772291904
#> [735,] 9.027362e-01 0.4756995100 1.389686948
#> [736,] 1.679264e+00 1.2944162345 2.812354400
#> [737,] -1.023912e+00 -0.5091171404 -1.559335596
#> [738,] -1.842238e+00 -1.3707174541 -3.057923877
#> [739,] 1.087308e+00 0.2711647511 1.506335685
#> [740,] 1.676490e+00 2.6802741268 3.577988508
#> [741,] -4.329651e-02 0.3033718905 0.114368827
#> [742,] -1.780238e+00 -2.9168323670 -3.838640073
#> [743,] 4.104045e-01 0.5363872596 0.809438451
#> [744,] 4.774547e-01 1.6729182429 1.523775839
#> [745,] 1.256105e+00 1.6284879110 2.470079954
#> [746,] 3.527572e-01 -0.3054551009 0.270366269
#> [747,] 2.082788e+00 4.3078836103 4.987889698
#> [748,] 4.097872e-01 0.6026433012 0.845438137
#> [749,] 1.924649e+00 3.8307370483 4.525897301
#> [750,] -3.130580e-01 0.2139796094 -0.271627181
#> [751,] -2.748347e+00 -3.8397528688 -5.558034615
#> [752,] 9.723683e-01 2.2631939960 2.468501389
#> [753,] -3.272296e-01 0.1722736555 -0.312443961
#> [754,] -5.188943e-01 -0.6442770940 -1.004597408
#> [755,] 1.054084e+00 2.1602529433 2.513271360
#> [756,] 1.372880e+00 2.5428457599 3.123126093
#> [757,] -5.400498e-01 -0.0823865045 -0.719152153
#> [758,] -4.402742e-01 0.0439459891 -0.524624745
#> [759,] 2.704591e+00 3.8666075331 5.518374779
#> [760,] 1.558033e-01 -0.7719633147 -0.234123774
#> [761,] -1.299856e+00 -2.9030812422 -3.231982646
#> [762,] -2.246968e-02 -0.5887395412 -0.354745027
#> [763,] 9.313969e-01 1.9337877960 2.234604235
#> [764,] 2.242187e-01 0.0678944084 0.317274753
#> [765,] 3.365291e-01 0.2645094730 0.566436627
#> [766,] -6.309279e-01 -1.7596076074 -1.763262779
#> [767,] -1.968302e+00 -2.7598070066 -3.986009505

```

```

#> [768,] 1.060626e+00 2.2900928732 2.593484350
#> [769,] 1.888251e+00 3.3997479847 4.241328072
#> [770,] -7.025689e-01 -0.6615246703 -1.243207591
#> [771,] 5.238460e-01 -0.1284575256 0.581936773
#> [772,] -4.586762e-02 -0.3284890302 -0.239493647
#> [773,] 2.003961e+00 2.1273970217 3.679515100
#> [774,] -7.305181e-01 -1.6262630925 -1.813449073
#> [775,] 2.711393e-01 -0.3067324491 0.167881535
#> [776,] -9.419754e-01 -0.0113500452 -1.180922905
#> [777,] -1.141929e+00 -0.9856151243 -1.970937200
#> [778,] -1.099869e+00 -0.4335499007 -1.612116829
#> [779,] 8.937116e-01 0.9620673429 1.648347227
#> [780,] 1.242219e+00 1.7657158831 2.528920087
#> [781,] -2.040070e-01 0.4299539189 -0.015786125
#> [782,] -1.045246e+00 -2.8359562235 -2.877236946
#> [783,] -1.258797e+00 -2.2403512999 -2.812994773
#> [784,] -1.530021e+00 -2.5859924105 -3.343023011
#> [785,] -4.476926e-01 -0.4017252251 -0.781204232
#> [786,] 9.352177e-01 1.0732595561 1.761811467
#> [787,] 2.254724e+00 4.2959270653 5.195654779
#> [788,] 5.160125e-01 1.6920574827 1.582478080
#> [789,] 5.594310e-01 1.5840635271 1.576687942
#> [790,] -1.962153e+00 -2.8466715622 -4.026547821
#> [791,] -2.116442e-01 -0.2629653791 -0.409850716
#> [792,] 4.353361e-01 1.6421263111 1.454166530
#> [793,] -8.258549e-01 -2.9640607758 -2.674753805
#> [794,] 1.910030e+00 3.1536567206 4.131915963
#> [795,] -2.122132e-01 0.6720451450 0.108331411
#> [796,] -2.007608e+00 -4.0399724101 -4.745461933
#> [797,] -2.321045e-01 -1.3658799658 -1.047435761
#> [798,] -1.519673e+00 -3.8640863299 -4.039407830
#> [799,] -1.795563e+00 -4.6974325144 -4.845908442
#> [800,] 1.301693e+00 1.6250141737 2.524999363
#> [801,] -9.710585e-01 -2.0804756596 -2.365467032
#> [802,] -5.098231e-01 -1.9852117053 -1.737448395
#> [803,] 1.424936e-01 -1.8197719892 -0.832210698
#> [804,] 8.755174e-01 1.3877595719 1.861900766
#> [805,] -4.510588e-02 0.8322732226 0.405630685
#> [806,] -1.925464e-01 -1.2311751074 -0.923352049
#> [807,] 8.263176e-01 1.8760357876 2.071522503
#> [808,] 5.518511e-01 -0.2439337140 0.552774026
#> [809,] -1.066278e+00 -1.0257039952 -1.898849306
#> [810,] -2.221598e+00 -4.8279681756 -5.449607817
#> [811,] 4.319725e-01 0.7611530729 0.961069029
#> [812,] 3.703950e-01 0.4613770006 0.717919948

```

```

#> [813,] -7.426506e-01 -1.1308894426 -1.553666460
#> [814,] 6.158265e-01 0.2086224774 0.883699794
#> [815,] 5.190151e-01 0.2261332262 0.772695763
#> [816,] -1.582380e+00 -3.8890063558 -4.131431862
#> [817,] -1.440727e+00 -2.7222297114 -3.307280658
#> [818,] -4.027723e-01 0.2784995733 -0.347693248
#> [819,] 4.507720e-01 -0.9022704050 0.061381198
#> [820,] 1.388007e+00 2.1836492639 2.942650951
#> [821,] 3.891984e-01 0.3475470824 0.678196502
#> [822,] -6.104495e-01 -0.9100225734 -1.266242455
#> [823,] 2.113624e+00 5.1808375846 5.510793856
#> [824,] -2.202035e+00 -3.6933400095 -4.795541872
#> [825,] -1.476444e+00 -0.6967489471 -2.227761779
#> [826,] -1.372616e-01 -0.1019062703 -0.227716180
#> [827,] -1.719269e+00 -3.2496262158 -3.947300327
#> [828,] 3.416700e-01 1.0555808004 1.011858692
#> [829,] -4.688095e-01 -1.6262703143 -1.487107851
#> [830,] -1.051609e+00 -1.3189195958 -2.043279892
#> [831,] 6.367145e-01 -0.1887755933 0.689207502
#> [832,] 1.770684e-01 -0.1863136339 0.117404374
#> [833,] -5.666918e-01 -1.7870657388 -1.698399840
#> [834,] 1.149176e+00 3.2909349052 3.259329602
#> [835,] 8.504672e-01 1.2313600833 1.743868565
#> [836,] 8.183436e-01 0.8517987671 1.493170470
#> [837,] -1.575118e+00 -2.2915799356 -3.235871034
#> [838,] 3.601981e-01 1.3016794251 1.171537313
#> [839,] -1.354838e+00 -2.4308118809 -3.038454489
#> [840,] 1.944007e+00 3.9846260632 4.635438144
#> [841,] -1.548854e+00 -2.3526227638 -3.236996471
#> [842,] 5.262699e-01 0.3855692566 0.870222624
#> [843,] 2.297396e-01 0.0134401600 0.293939365
#> [844,] -3.518786e-01 0.4878380443 -0.168055693
#> [845,] -2.447061e-01 -0.2828391724 -0.462107428
#> [846,] -9.335210e-01 -2.6186722150 -2.617335062
#> [847,] -1.478044e+00 -3.2600776987 -3.652296915
#> [848,] 1.120091e+00 2.0471515516 2.532814437
#> [849,] 1.337770e+00 3.3564810815 3.530878417
#> [850,] -5.464233e-02 -0.0017790230 -0.069125159
#> [851,] -1.063119e+00 -1.4961068075 -2.155964387
#> [852,] 9.131356e-01 1.4487482237 1.942656043
#> [853,] 3.408442e-01 -0.4789990361 0.159201310
#> [854,] -1.734242e+00 -3.1208256501 -3.894491595
#> [855,] 4.319491e-01 1.7768552121 1.524711980
#> [856,] -8.859498e-01 -1.2283261174 -1.786430911
#> [857,] 1.000447e+00 0.5628046613 1.559870272

```

```

#> [858,] 5.622893e-01 1.0367027721 1.276489898
#> [859,] 1.261707e+00 1.5755642514 2.447695266
#> [860,] 1.596358e+00 1.6446661065 2.903346900
#> [861,] -8.482980e-01 -1.6697192039 -1.984434516
#> [862,] 3.046774e+00 5.3577406711 6.772586226
#> [863,] 7.394729e-01 2.3954557934 2.251485238
#> [864,] 2.589329e-01 1.1242515413 0.946796615
#> [865,] 1.183687e+00 2.3189310779 2.762943768
#> [866,] 1.195254e+00 2.1504437237 2.683863253
#> [867,] -1.768781e-01 -0.3386863923 -0.408520118
#> [868,] -2.108398e+00 -3.8550943681 -4.768544864
#> [869,] 1.779197e+00 3.7541299901 4.302006735
#> [870,] -5.349365e-01 -0.5057325992 -0.947715276
#> [871,] -3.176576e-01 0.7246712684 0.006049646
#> [872,] -8.169780e-01 -0.4100490187 -1.246314919
#> [873,] -5.675621e-01 -0.6692341484 -1.079135317
#> [874,] 2.062342e+00 3.2055164192 4.350625376
#> [875,] 1.471486e+00 2.3098010040 3.116756369
#> [876,] 5.182628e-01 0.0343507084 0.665326372
#> [877,] 2.896660e+00 5.2257775420 6.512163122
#> [878,] -2.982059e-01 -0.0831083865 -0.417978319
#> [879,] 3.550703e-01 2.0439978540 1.577098624
#> [880,] -5.401479e-01 -0.6092272965 -1.011649050
#> [881,] 8.106197e-01 1.3444853698 1.756959312
#> [882,] 1.589463e-01 0.0252131344 0.212194971
#> [883,] -1.134200e+00 -0.4146239578 -1.644422992
#> [884,] 1.276697e+00 2.0928874022 2.753480094
#> [885,] -1.595041e+00 -2.4507571977 -3.349051733
#> [886,] -6.817875e-01 -1.1617079476 -1.494874335
#> [887,] -6.701031e-01 -2.3383140746 -2.133271253
#> [888,] -1.004060e+00 -0.9005238655 -1.751794871
#> [889,] -2.319012e+00 -3.9692502790 -5.094528644
#> [890,] 1.793146e-01 -0.0249354458 0.209763482
#> [891,] 6.318347e-01 0.9811794987 1.332398588
#> [892,] 1.249699e+00 0.6059736983 1.894639744
#> [893,] 8.723359e-01 2.2558854699 2.339707081
#> [894,] 3.781505e-01 0.2149656378 0.590842888
#> [895,] 1.289618e-01 0.8442617436 0.629342596
#> [896,] -4.395716e-01 -0.0547460205 -0.578518538
#> [897,] 1.359005e-02 -1.5171586311 -0.825013009
#> [898,] -1.760526e+00 -3.7749269530 -4.290266871
#> [899,] -3.974394e-01 -0.0460879988 -0.521175757
#> [900,] 2.446997e+00 3.8296413449 5.176645557
#> [901,] 2.663793e-01 2.1222500488 1.509929535
#> [902,] -1.018343e+00 -2.7941973548 -2.820515908

```



```

#> [903,] 4.665221e-01 0.9531251785 1.110688079
#> [904,] 1.152207e+00 1.3848284548 2.205300963
#> [905,] -7.254376e-01 -1.9207926128 -1.970565323
#> [906,] -2.566635e-01 -0.6017529392 -0.654001837
#> [907,] -1.916779e+00 -2.3125541571 -3.673555176
#> [908,] -9.947139e-01 -1.7647399654 -2.219744688
#> [909,] 1.475718e+00 2.9501848903 3.477419958
#> [910,] -8.967671e-01 -1.0923269066 -1.724446010
#> [911,] -2.316487e+00 -3.2590019257 -4.697221769
#> [912,] -3.468261e+00 -5.3623363875 -7.300723100
#> [913,] -1.367665e+00 -1.3613191455 -2.460925374
#> [914,] -1.836508e+00 -5.1274669436 -5.135617018
#> [915,] 1.514770e-01 0.1299288681 0.260993849
#> [916,] 4.428022e-01 1.5264269438 1.399268328
#> [917,] 8.698820e-02 0.4396261243 0.352446607
#> [918,] 7.896304e-01 2.2713283033 2.245145098
#> [919,] 1.265139e+00 2.2320998919 2.816324587
#> [920,] 1.021052e+00 2.4757453516 2.647166275
#> [921,] -8.575881e-01 -0.3403661336 -1.258283790
#> [922,] 7.981473e-01 1.2359220631 1.681158453
#> [923,] 3.802084e-01 0.2611438931 0.619036059
#> [924,] 4.282055e-01 -0.3609387380 0.333657642
#> [925,] -8.899726e-01 -1.5083765058 -1.946863516
#> [926,] 1.904490e+00 2.8141719820 3.936607196
#> [927,] -1.196455e+00 -1.9360080626 -2.566357860
#> [928,] 5.581479e-03 0.5773601341 0.327370692
#> [929,] -1.702616e+00 -2.1626292687 -3.323295991
#> [930,] 2.291424e+00 3.2006036666 4.633560351
#> [931,] -7.733567e-01 -1.4924003024 -1.792579700
#> [932,] -6.408513e-01 -1.4943074433 -1.628406593
#> [933,] -4.617410e-01 -2.5483402899 -1.990003838
#> [934,] -1.573852e+00 -2.7252779117 -3.474976274
#> [935,] 3.483435e-01 -0.0387117073 0.412893870
#> [936,] -2.019643e+00 -3.2874184468 -4.342832993
#> [937,] 9.395913e-01 0.7005851775 1.560446570
#> [938,] -2.311744e+00 -3.7200562274 -4.947173129
#> [939,] 9.115119e-01 -0.0393112484 1.114820616
#> [940,] 3.724294e-01 0.7245200361 0.866490125
#> [941,] 5.235767e-01 0.2940835140 0.816093517
#> [942,] -5.010966e-01 -0.7781998479 -1.056725542
#> [943,] 5.863187e-01 -0.9665730294 0.194719871
#> [944,] -2.030515e-01 0.8150820875 0.199135373
#> [945,] -4.867041e-01 0.5896347922 -0.279687523
#> [946,] -2.003960e-01 -1.2891713676 -0.965325847
#> [947,] -4.774758e-01 -0.8224934512 -1.051851967

```

```

#> [948,] 1.026567e+00 1.8895018610 2.328701983
#> [949,] -1.538663e+00 -4.2889246451 -4.298854932
#> [950,] 1.564532e+00 1.7019923990 2.895474553
#> [951,] 1.504851e-02 0.9110654373 0.524368360
#> [952,] -6.338945e-01 -0.7164124759 -1.188032399
#> [953,] -1.341246e+00 -2.0283137148 -2.798135240
#> [954,] -1.976127e+00 -3.6003680263 -4.462243437
#> [955,] -1.009894e+00 -2.9220877896 -2.880953122
#> [956,] -1.764811e+00 -2.8390280885 -3.776224998
#> [957,] -1.919825e-01 -0.3580331866 -0.438091752
#> [958,] 2.994453e+00 4.3918470167 6.171313296
#> [959,] -5.748499e-01 -1.4292155790 -1.509980889
#> [960,] 8.698474e-01 2.6021575146 2.528770386
#> [961,] -1.097821e+00 -1.0434902957 -1.948053447
#> [962,] -1.531160e+00 -2.2057546907 -3.133426293
#> [963,] -9.731138e-01 -1.1146737209 -1.832050334
#> [964,] -2.417834e+00 -5.2888047898 -5.950054598
#> [965,] 5.162659e-01 0.8233687312 1.100708279
#> [966,] -7.071343e-02 -0.1760879586 -0.185899648
#> [967,] 1.720639e+00 2.8837660096 3.745971315
#> [968,] -1.873626e-01 -0.2745361855 -0.385993454
#> [969,] 5.372226e-01 0.7859483963 1.106074058
#> [970,] -1.285165e+00 -2.3174425723 -2.888658358
#> [971,] 1.092668e-01 0.3458791452 0.328201974
#> [972,] 8.112677e-01 2.1150580698 2.185402939
#> [973,] 1.572989e-01 -0.5479400541 -0.107935294
#> [974,] 1.862946e+00 3.4596332477 4.243007881
#> [975,] -3.587574e-01 -0.2375477792 -0.579192230
#> [976,] -1.073396e+00 -2.1332717616 -2.522379864
#> [977,] 1.957414e+00 1.8923029767 3.491003720
#> [978,] -5.785540e-01 0.2030079084 -0.608784109
#> [979,] -1.433793e+00 -1.4112864039 -2.571115663
#> [980,] 1.077032e+00 0.8985582951 1.841698795
#> [981,] -9.401581e-01 -1.9262232551 -2.241331212
#> [982,] 2.189518e+00 3.9960878593 4.947945854
#> [983,] 3.074032e-01 0.0503485959 0.411266852
#> [984,] -5.525047e-01 -1.4074324611 -1.470028220
#> [985,] 2.158448e+00 3.8039753205 4.802587832
#> [986,] 1.291282e+00 4.0179018122 3.839969703
#> [987,] -7.919195e-01 -2.1452091118 -2.178008655
#> [988,] 4.774705e-01 1.1278626515 1.221312498
#> [989,] -2.192204e+00 -3.5846721975 -4.722977179
#> [990,] -1.406992e+00 -1.1091267603 -2.370009079
#> [991,] 2.447307e+00 4.5467205171 5.574981986
#> [992,] 1.527317e+00 2.3041198812 3.183222943

```

```

#> [993,] -3.200660e-01 -1.1115482866 -1.015978540
#> [994,]  3.120238e-02 -0.1870797365 -0.064912685
#> [995,] -1.125165e-01 -0.3764075475 -0.349196151
#> [996,] -6.977593e-01 -1.8862645499 -1.916889485
#> [997,]  4.998201e-01  0.6464463139  0.982016161
#> [998,] -7.620848e-02  0.0518952783 -0.066230712
#> [999,]  8.511380e-01  1.5980979856  1.948229237
#> [1000,] 9.242892e-02  0.1125802665  0.177734316
#> [1001,] -3.311510e-01 -0.4094310787 -0.640155650
#> [1002,] -8.468236e-01 -1.8236017120 -2.067994348
#> [1003,]  7.636803e-01  0.7777604764  1.383918226
#> [1004,]  1.290296e-01 -0.1674177349  0.067987425
#> [1005,]  2.264311e+00  4.6255500493  5.390536130
#> [1006,] -1.545027e+00 -1.2657968553 -2.629080943
#> [1007,] -6.345302e-02 -0.9874672354 -0.627127592
#> [1008,]  6.941982e-01  1.1325794737  1.494185219
#> [1009,]  6.823573e-02  0.7486646088  0.500566076
#> [1010,]  7.131477e-02  0.5447896925  0.391263529
#> [1011,] -1.308762e+00 -2.2499612083 -2.880633341
#> [1012,]  2.373345e-01  0.1961003679  0.404778760
#> [1013,] -3.047723e-01 -0.3196718645 -0.557449317
#> [1014,] -1.908527e+00 -3.0257482315 -4.059058379
#> [1015,] -3.561645e-01 -2.8561620692 -2.029180238
#> [1016,]  2.171155e-01  0.4690665341  0.531050873
#> [1017,]  3.544169e-01  0.9921587292  0.992557180
#> [1018,] -2.730251e+00 -3.8173250362 -5.523023337
#> [1019,]  2.654052e+00  3.5325101800  5.269943545
#> [1020,]  1.953656e+00  4.2563395648  4.798259712
#> [1021,]  4.399442e-01 -0.2106038420  0.431725180
#> [1022,]  2.582222e-01  1.1913672068  0.983156714
#> [1023,]  8.855602e-01  1.7841782701  2.094419749
#> [1024,]  3.505603e-01  1.1923305095  1.098835098
#> [1025,]  1.807910e+00  3.1737656921  4.015734003
#> [1026,] -2.209281e+00 -2.9133236250 -4.371701115
#> [1027,]  1.758126e-01  0.0569488980  0.250839011
#> [1028,]  2.063745e+00  2.4509102112  3.933600678
#> [1029,] -8.404111e-01 -1.8223155942 -2.059284300
#> [1030,] -2.338893e-01 -0.0907885078 -0.342039018
#> [1031,] -1.533062e+00 -3.2419993127 -3.710871018
#> [1032,] -1.182255e-01  0.1393216200 -0.070107177
#> [1033,]  5.858471e-01  1.7433101264  1.698003535
#> [1034,]  1.922266e-01  0.5098624606  0.522654925
#> [1035,] -1.016255e-01  1.3184949187  0.604984511
#> [1036,]  3.732849e-01  2.5499054110  1.880569437
#> [1037,] -7.365075e-01 -1.0560410408 -1.504468409

```

```

#> [1038,] 1.711442e+00 2.2531522390 3.384538239
#> [1039,] 6.846485e-01 0.7864646846 1.290197655
#> [1040,] 2.005180e+00 3.7424766549 4.577335929
#> [1041,] -2.804570e+00 -5.1728125348 -6.367935377
#> [1042,] -6.860602e-01 -1.0981516206 -1.464931187
#> [1043,] 1.405197e-01 -0.8257751291 -0.283045409
#> [1044,] -6.646534e-01 -2.0342008900 -1.957705598
#> [1045,] -1.309074e+00 -1.5919275156 -2.515842206
#> [1046,] 1.154844e+00 2.2032425378 2.662774016
#> [1047,] -8.961751e-01 -0.8987786932 -1.616296635
#> [1048,] -1.224824e-01 0.2676109914 -0.004220210
#> [1049,] -2.367535e-01 -0.2974031804 -0.460273076
#> [1050,] 1.675068e+00 3.0133502904 3.761058359
#> [1051,] -6.571844e-01 -0.4272163279 -1.056582692
#> [1052,] 1.006459e-01 0.8180590717 0.579491868
#> [1053,] -2.328730e+00 -3.0270762145 -4.583778994
#> [1054,] 6.598824e-01 1.1773630504 1.476247050
#> [1055,] -6.694643e-01 -1.5460313076 -1.692790976
#> [1056,] -7.725273e-01 0.2590122428 -0.819584859
#> [1057,] 1.983113e+00 4.6199324396 5.036770785
#> [1058,] -9.180415e-01 -1.1314096715 -1.772663974
#> [1059,] -2.166431e-01 -1.0930073944 -0.876722930
#> [1060,] 9.156024e-01 1.7979068975 2.139500545
#> [1061,] 7.083467e-01 2.2473307347 2.130468349
#> [1062,] 2.552057e+00 3.6834577441 5.226528217
#> [1063,] 6.237505e-01 1.0620432618 1.367193714
#> [1064,] 4.110974e-01 1.3327950277 1.252275494
#> [1065,] 1.135656e+00 1.3961169505 2.190926316
#> [1066,] 1.523600e+00 2.5104061171 3.293068571
#> [1067,] 6.335449e-01 1.1681212453 1.438276004
#> [1068,] 1.732511e+00 2.7702436679 3.697775267
#> [1069,] 1.509590e+00 2.7457510796 3.406204337
#> [1070,] 1.782556e+00 2.5264260663 3.624871163
#> [1071,] -1.794893e-01 -0.4988496509 -0.500660144
#> [1072,] 1.843581e-01 0.0014054519 0.230670817
#> [1073,] 1.591415e+00 2.6472595868 3.453580285
#> [1074,] 1.332308e+00 2.4517875205 3.022000387
#> [1075,] 2.130618e+00 3.3849859190 4.535362061
#> [1076,] -1.873431e-01 -0.0756259074 -0.275582180
#> [1077,] 1.066568e+00 2.0054073681 2.442905404
#> [1078,] -1.380703e+00 -2.2895391122 -2.992307008
#> [1079,] -1.758230e+00 -2.4674194733 -3.561791154
#> [1080,] 6.853886e-01 0.1631515923 0.945207882
#> [1081,] 5.467833e-01 -0.5148021159 0.396133969
#> [1082,] 1.539172e+00 3.4748675422 3.847722297

```

```

#> [1083,] -1.325161e+00 -2.9729974941 -3.302337847
#> [1084,] -4.580954e-01 -0.0781522805 -0.614606904
#> [1085,] -3.910125e-01 -1.1563970365 -1.129336511
#> [1086,] 8.047532e-01 0.3970092298 1.223834302
#> [1087,] -1.447528e-01 0.5311417583 0.114257669
#> [1088,] 5.599856e-01 1.8054383972 1.700233356
#> [1089,] 1.445347e+00 2.7803657149 3.345304666
#> [1090,] 1.332900e+00 1.6976853891 2.604243644
#> [1091,] 2.644534e-01 1.4537137310 1.136518253
#> [1092,] 3.271788e-01 0.3897683229 0.624290379
#> [1093,] 8.460508e-01 2.3717453828 2.371227533
#> [1094,] 7.078545e-01 2.3982199552 2.213591834
#> [1095,] 1.385247e-01 0.1338544406 0.247021135
#> [1096,] -1.982211e+00 -3.0530861581 -4.166111381
#> [1097,] 1.467715e+00 2.4548957731 3.192574853
#> [1098,] -7.561049e-01 -1.8149618190 -1.950075156
#> [1099,] 2.421136e-02 0.3910848971 0.247226813
#> [1100,] -1.825969e+00 -2.7739649205 -3.816381004
#> [1101,] -4.068796e-01 -0.0325724642 -0.525446970
#> [1102,] 9.814156e-01 1.2807622434 1.934574677
#> [1103,] 9.343776e-03 -0.9426979774 -0.511506411
#> [1104,] 2.333737e+00 3.4108623963 4.803007809
#> [1105,] -1.025779e+00 -1.7031927800 -2.224326025
#> [1106,] -3.013033e-01 -1.2860545466 -1.089425467
#> [1107,] -1.805248e+00 -2.5711660349 -3.677996647
#> [1108,] -8.430867e-01 -0.3241804414 -1.231218503
#> [1109,] 1.172985e+00 2.4120655511 2.801283158
#> [1110,] 1.745293e+00 3.1473264438 3.922979389
#> [1111,] 1.390554e+00 2.3806438762 3.055150299
#> [1112,] -6.861335e-01 -1.8243915085 -1.868055437
#> [1113,] 9.921615e-01 1.1758671592 1.889762174
#> [1114,] -1.287041e-01 0.8023207681 0.284763082
#> [1115,] 2.973770e+00 4.8799088803 6.416375678
#> [1116,] -7.573152e-02 0.2416008386 0.039642688
#> [1117,] -3.244877e-01 0.9178156330 0.104719656
#> [1118,] 9.916469e-01 2.1790456536 2.445842606
#> [1119,] 7.520826e-05 0.1638744008 0.091037215
#> [1120,] 1.311049e+00 1.0697509466 2.228518817
#> [1121,] 1.018362e+00 1.1110876098 1.886484363
#> [1122,] -2.028528e-01 -0.7536676082 -0.671207315
#> [1123,] -1.026951e-01 -1.1230837033 -0.751323119
#> [1124,] 1.693464e+00 1.9578722853 3.198252264
#> [1125,] 3.984147e-01 0.6848893073 0.876899887
#> [1126,] -1.116515e+00 -1.1320896925 -2.020533336
#> [1127,] 1.367476e+00 3.5981198111 3.702020849

```

```

#> [1128,] 1.119688e+00 2.5753958475 2.825465508
#> [1129,] -1.936105e-01 -0.7698370684 -0.668655676
#> [1130,] -1.223152e+00 -2.8673747605 -3.116518567
#> [1131,] 1.689028e+00 3.0311073128 3.788320874
#> [1132,] -1.030036e+00 -1.7486185573 -2.254843398
#> [1133,] 1.994689e+00 2.7704314755 4.024809382
#> [1134,] -1.523176e+00 -2.3176503599 -3.185568468
#> [1135,] 5.922712e-01 -0.1658460750 0.646512436
#> [1136,] 6.263379e-01 1.6520509846 1.697849735
#> [1137,] 7.090076e-01 1.6217143609 1.784101622
#> [1138,] -9.246681e-01 -2.7456321049 -2.676753148
#> [1139,] -1.479042e-01 0.2636371943 -0.038125873
#> [1140,] -3.005278e+00 -4.5749270842 -6.286413625
#> [1141,] 8.736876e-01 1.5685931548 1.959974147
#> [1142,] -2.681706e-01 -0.5751910522 -0.653610167
#> [1143,] -6.590818e-01 -0.7812580306 -1.255427029
#> [1144,] 2.280508e-01 -0.0434296756 0.260273073
#> [1145,] 7.934938e-01 -0.2303194670 0.861652971
#> [1146,] 1.833103e-02 0.2834284023 0.180149318
#> [1147,] -1.572197e-01 0.7607478876 0.226133425
#> [1148,] -1.064137e-01 0.8089802663 0.316254522
#> [1149,] -3.981209e-01 -0.4546470533 -0.748758693
#> [1150,] -2.662801e-01 -1.8143649447 -1.338942453
#> [1151,] 5.372482e-01 1.1000613273 1.280425508
#> [1152,] 5.171482e-03 0.1454172543 0.087149221
#> [1153,] -9.499626e-01 -0.3331136887 -1.369448173
#> [1154,] 8.454744e-01 1.0190835415 1.619838019
#> [1155,] 2.186003e-01 -0.6454694892 -0.085618387
#> [1156,] -1.477809e-01 -1.5515883476 -1.045346312
#> [1157,] 1.169448e-01 1.1050511946 0.759084939
#> [1158,] 5.517894e-01 1.0893668989 1.292623095
#> [1159,] -3.635161e-01 0.1812336597 -0.352720090
#> [1160,] -7.647693e-01 -0.9569494568 -1.484718610
#> [1161,] 2.201370e+00 1.7775985744 3.731556453
#> [1162,] 1.186050e+00 1.7877948015 2.471131994
#> [1163,] -1.969873e+00 -4.0836824457 -4.722663770
#> [1164,] -8.040667e-01 -0.9814177259 -1.547300471
#> [1165,] 1.054339e+00 2.5056192139 2.705252631
#> [1166,] -3.186553e+00 -5.2787849037 -6.903071225
#> [1167,] -1.268316e+00 -3.0895278588 -3.296122736
#> [1168,] 4.304306e-01 1.3767156139 1.300757669
#> [1169,] 4.390163e-01 0.2046471504 0.661015027
#> [1170,] 2.142098e-01 -0.7201021389 -0.132511274
#> [1171,] -1.572106e+00 -1.3035462867 -2.683798086
#> [1172,] 1.601026e+00 2.9034250842 3.607726262

```

```

#> [1173,] -8.986111e-01 -1.5372657982 -1.973667914
#> [1174,]  2.533002e+00  3.2961554171  4.987830527
#> [1175,]  1.245636e+00  1.4535074362  2.359918654
#> [1176,]  1.609019e+00  5.0079088476  4.785593645
#> [1177,]  4.203290e-01  0.3734513858  0.731391622
#> [1178,]  2.027464e+00  2.3735243554  3.845412938
#> [1179,] -3.477529e-01 -0.4006629778 -0.655991972
#> [1180,] -1.906510e+00 -4.8277146327 -5.056558149
#> [1181,] -1.948095e+00 -3.4650349013 -4.352184025
#> [1182,] -2.260947e-01 -0.9777258413 -0.824532327
#> [1183,]  9.843533e-01  2.4162794164  2.568402390
#> [1184,]  4.663888e-01  0.3511208072  0.776434693
#> [1185,] -5.766766e-02 -1.0238066912 -0.640080248
#> [1186,]  3.746985e-01  0.3167636322  0.643031956
#> [1187,]  9.636628e-01  2.4561986615  2.564755218
#> [1188,]  7.524841e-01  1.0921657199  1.544438586
#> [1189,]  1.217612e+00  1.7233353669  2.474716556
#> [1190,] -2.028756e-01 -0.3640518531 -0.455015241
#> [1191,]  1.577394e-01  0.9322648884  0.714065775
#> [1192,] -1.259097e+00 -2.2531774645 -2.820487690
#> [1193,] -8.122263e-01 -1.4593994612 -1.822735244
#> [1194,]  1.019252e+00  0.3167509037  1.446769690
#> [1195,]  2.429611e+00  4.3600730268  5.449332950
#> [1196,] -1.689501e+00 -3.0487074273 -3.798678008
#> [1197,] -1.517602e+00 -2.7940694330 -3.443009714
#> [1198,]  1.391382e+00  1.0082245084  2.294547727
#> [1199,] -1.205674e+00 -1.5169461992 -2.345293018
#> [1200,] -1.389746e+00 -2.8401150832 -3.309130046
#> [1201,]  3.891045e-01 -0.6129346518  0.145052263
#> [1202,]  1.379646e+00  2.7121499649  3.225520671
#> [1203,]  1.286885e+00  2.9292534239  3.230332802
#> [1204,]  1.320020e+00  2.3801557163  2.966924682
#> [1205,] -3.428299e-01 -0.3246440366 -0.607665699
#> [1206,] -2.097476e-01  0.6044463475  0.073891399
#> [1207,] -8.642959e-01 -0.6240980271 -1.424107667
#> [1208,]  1.257236e+00  1.6977979279  2.509954107
#> [1209,] -8.948055e-02 -0.0765845048 -0.154081612
#> [1210,]  1.208239e-02 -0.9077489733 -0.488696178
#> [1211,] -5.648010e-01 -2.2930097891 -1.976819756
#> [1212,]  2.338768e-01  0.3243912037  0.471663119
#> [1213,] -5.809562e-01 -0.7285904467 -1.128777749
#> [1214,]  9.561093e-01  0.7623929943  1.615345002
#> [1215,]  2.069840e-01  0.9204060543  0.768891637
#> [1216,]  1.441073e+00  1.8278586165  2.811373468
#> [1217,]  1.862617e+00  3.0397411391  4.009574139

```

```

#> [1218,] -1.786107e-02  0.0541677878  0.007788468
#> [1219,]  2.988372e-01  1.6404834085  1.283043563
#> [1220,] -1.373479e+00 -1.8586992734 -2.744200654
#> [1221,]  1.690058e+00  3.6665131134  4.142229330
#> [1222,] -6.605053e-01 -1.8954714925 -1.875543949
#> [1223,]  2.580059e-01  0.4714926680  0.583386748
#> [1224,] -1.135166e+00 -2.4809789846 -2.792368869
#> [1225,] -7.169358e-01 -0.6882340988 -1.275945439
#> [1226,] -1.474080e+00 -2.5148669668 -3.233793430
#> [1227,] -3.779010e-01 -0.3858443495 -0.685362287
#> [1228,]  7.318212e-02 -0.2279235287 -0.035231406
#> [1229,]  9.158504e-01  0.9603617365  1.675007359
#> [1230,] -1.544281e+00 -3.8086318629 -4.039318330
#> [1231,]  8.255603e-02 -0.6030310685 -0.231711308
#> [1232,] -8.123169e-01 -2.0639636124 -2.158356008
#> [1233,]  6.244327e-01  1.2011563967  1.445246402
#> [1234,]  1.232502e+00  0.6058095427  1.873104112
#> [1235,] -1.020723e+00 -2.3218614263 -2.561356049
#> [1236,]  1.406238e+00  1.7290280012  2.713088863
#> [1237,] -9.325743e-01 -1.0955271873 -1.770872877
#> [1238,]  5.330148e-01  2.6288993884  2.123587668
#> [1239,] -1.222820e+00 -1.5127056820 -2.364319838
#> [1240,] -1.195108e-01 -1.6846855251 -1.083957478
#> [1241,]  7.782507e-01  0.3810776461  1.181944915
#> [1242,]  5.145284e-01  0.8729972859  1.126083424
#> [1243,]  6.813531e-01  1.1157457714  1.468825586
#> [1244,]  1.346726e+00  1.6893447152  2.616855322
#> [1245,] -1.667527e+00 -3.2634154317 -3.890431167
#> [1246,] -8.677689e-01 -2.0199560133 -2.203081155
#> [1247,]  1.167352e+00  0.7646394287  1.880007398
#> [1248,] -6.226153e-01 -1.4194850336 -1.564143375
#> [1249,]  8.845258e-01  1.6431975313  2.014891423
#> [1250,]  1.740833e+00  2.8094169971  3.729892106
#> [1251,] -1.076396e+00 -1.6606023499 -2.263808283
#> [1252,]  1.947699e-01 -0.3785830974  0.032776332
#> [1253,]  1.350552e+00  3.2880153493  3.508821935
#> [1254,] -1.002502e+00 -1.2063332871 -1.919564518
#> [1255,] -5.527807e-01 -1.1630387775 -1.334744078
#> [1256,]  2.629196e-01 -0.2099600332  0.211336290
#> [1257,]  1.657842e+00  3.0381001565  3.753314036
#> [1258,]  5.042398e-01  1.1691444417  1.277602956
#> [1259,] -2.110584e+00 -3.0572943487 -4.328525438
#> [1260,]  1.093603e-02 -0.0454786717 -0.011601747
#> [1261,]  6.130871e-01  1.4055999726  1.544556254
#> [1262,] -2.056370e+00 -4.3765588241 -4.993058832

```



```

#> [1263,] -1.182710e+00 -1.1668488910 -2.122367373
#> [1264,]  1.308790e+00  2.8956755406  3.239013109
#> [1265,] -3.120554e-01 -0.3167827647 -0.564927903
#> [1266,]  1.815880e+00  3.5850878415  4.253938359
#> [1267,] -8.587744e-01 -1.5362462240 -1.923426452
#> [1268,]  1.329562e+00  2.3131895107  2.941660552
#> [1269,] -1.673686e+00 -3.3699586673 -3.957237881
#> [1270,] -1.257247e+00 -2.6754508125 -3.052524382
#> [1271,]  1.043155e+00  1.5542866470  2.163356449
#> [1272,]  9.318611e-01  1.4828045732  1.984906207
#> [1273,]  2.251854e-01  0.3365035673  0.467547007
#> [1274,]  6.617408e-02  0.5173285202  0.369613392
#> [1275,]  1.484187e-01  0.4780043034  0.450347475
#> [1276,] -2.355034e+00 -3.7133199755 -4.997416973
#> [1277,]  3.697844e-01  0.8663799567  0.941918249
#> [1278,] -1.405155e+00 -1.9572190199 -2.838373815
#> [1279,] -1.446066e+00 -2.3684786672 -3.117621738
#> [1280,]  1.272454e+00  3.3698760985  3.456864545
#> [1281,] -1.952440e+00 -2.8769696803 -4.031250511
#> [1282,]  4.152957e-01  0.2384868879  0.650215479
#> [1283,]  1.931201e+00  2.1585321946  3.606063754
#> [1284,]  2.456869e+00  4.6874817080  5.665021053
#> [1285,]  9.871029e-01  2.5743352099  2.659545471
#> [1286,] -5.893358e-01 -1.6421427797 -1.646210233
#> [1287,]  4.796919e-01 -0.0779684945  0.554896828
#> [1288,] -2.008889e+00 -1.2997472944 -3.226349241
#> [1289,]  2.983881e-01  0.2154476809  0.491648306
#> [1290,] -7.008532e-01 -0.3545515749 -1.070710876
#> [1291,] -1.577025e+00 -1.0296074673 -2.537907433
#> [1292,]  7.330704e-01  2.1645747640  2.115372163
#> [1293,] -8.427351e-01 -2.1256964385 -2.230546034
#> [1294,]  8.362095e-01  1.5065666797  1.878817644
#> [1295,] -2.369986e+00 -5.1488572498 -5.812724689
#> [1296,]  9.192179e-01  0.9445479253  1.670430465
#> [1297,]  7.787048e-01  1.3120592355  1.699166950
#> [1298,]  1.677468e-01  0.2040820854  0.322433819
#> [1299,] -9.918415e-01 -2.1491885125 -2.429515777
#> [1300,]  1.297515e+00  2.6190079959  3.071414831
#> [1301,]  1.071335e-01  1.5473745818  0.992321449
#> [1302,]  7.004931e-01 -0.2485268653  0.735578613
#> [1303,] -1.267972e-01 -0.9910347517 -0.708096336
#> [1304,]  6.987971e-01  0.0305953606  0.888364815
#> [1305,] -7.651226e-01 -0.8240952839 -1.411430659
#> [1306,]  6.107127e-01  1.5810217807  1.638947116
#> [1307,]  6.070791e-01  1.3324525892  1.496470646

```

```

#> [1308,] -8.524961e-01 -1.9381893810 -2.138659241
#> [1309,]  2.874808e-01  0.2400024973  0.491674092
#> [1310,]  1.015707e+00  2.2558629931  2.518476007
#> [1311,] -6.507025e-01 -0.2630799539 -0.957411088
#> [1312,] -1.105371e+00 -2.1525508999 -2.572950309
#> [1313,] -1.326833e+00 -2.3670666007 -2.968156041
#> [1314,] -1.089570e-01  0.6048897823  0.199821383
#> [1315,] -1.643555e+00 -2.8078496832 -3.607718975
#> [1316,]  1.091801e+00  1.8426172612  2.384029490
#> [1317,]  9.976414e-01  1.7168496602  2.196818129
#> [1318,] -9.443787e-01 -2.1589279067 -2.375735598
#> [1319,]  6.224993e-01  1.9158083136  1.839437307
#> [1320,]  1.828350e+00  3.8041563618  4.391062871
#> [1321,] -3.660155e-02 -0.4291154453 -0.283782496
#> [1322,] -9.284210e-01 -1.1390882633 -1.789868310
#> [1323,] -1.147809e+00 -3.2780677212 -3.250484900
#> [1324,] -7.669986e-02 -1.4699847369 -0.911423146
#> [1325,]  7.318263e-02  1.1474283588  0.728031946
#> [1326,]  1.707684e+00  3.3005871707  3.961134937
#> [1327,]  6.875278e-01 -0.0003397611  0.857144578
#> [1328,]  8.020002e-02 -0.0058701970  0.096750076
#> [1329,]  5.871960e-01  0.7227252546  1.133303631
#> [1330,]  1.912288e-01 -0.9216073024 -0.272995088
#> [1331,]  4.947307e-02  0.0904248105  0.111873889
#> [1332,] -1.401407e-01 -0.1146425149 -0.238374387
#> [1333,]  1.054662e+00  1.4950366895  2.144824183
#> [1334,] -8.350772e-01 -1.9159788423 -2.104612316
#> [1335,] -1.578805e+00 -3.4960560944 -3.908901896
#> [1336,] -1.077635e-01 -0.0358128838 -0.154253535
#> [1337,]  6.442163e-01  0.7284897400  1.207605949
#> [1338,] -1.180275e-01 -0.4119572549 -0.375796913
#> [1339,] -4.247653e-01 -1.0647629725 -1.120572490
#> [1340,] -8.954434e-01 -0.0907089562 -1.166939319
#> [1341,]  1.885482e-01 -0.0464248640  0.209351895
#> [1342,]  1.317551e+00  3.2673063606  3.456177232
#> [1343,]  6.771135e-01  2.1186782266  2.020124486
#> [1344,] -2.124794e+00 -4.1947281476 -4.977472940
#> [1345,]  1.036654e-01 -0.4495483219 -0.120211805
#> [1346,] -1.597492e+00 -3.2868788263 -3.816120336
#> [1347,]  2.610231e+00  3.4639599831  5.177256973
#> [1348,] -4.406939e-01 -1.1705181712 -1.199124889
#> [1349,]  1.799577e-01  0.1173333904  0.289518738
#> [1350,]  7.607098e-01  0.0702799129  0.987592034
#> [1351,] -1.052496e+00 -1.5589869171 -2.177613275
#> [1352,] -1.959651e-01  0.0758995913 -0.202243445

```

```

#> [1353,] -5.124829e-01 -0.3675870501 -0.843051093
#> [1354,]  3.251888e-01  1.6596362527  1.326532375
#> [1355,]  1.063868e+00  1.3619019390  2.082419661
#> [1356,]  1.291060e+00  3.9842685485  3.821027937
#> [1357,] -2.461434e-01 -0.8794314178 -0.794983361
#> [1358,]  1.907761e+00  2.1797924852  3.588632873
#> [1359,] -1.930929e-01 -0.7508928629 -0.657497057
#> [1360,] -4.509495e-01 -1.4946508331 -1.391793452
#> [1361,]  3.427770e-02 -0.5432783964 -0.258753176
#> [1362,]  1.710419e+00  1.1615691419  2.777479769
#> [1363,]  6.444204e-01  1.2428889454  1.493330413
#> [1364,]  5.834246e-02 -0.2441346176 -0.062732628
#> [1365,] -4.353139e-01 -0.9050710284 -1.045104092
#> [1366,]  3.038802e-01  0.7932116615  0.819131649
#> [1367,]  1.598128e+00  2.6008875059  3.436217228
#> [1368,] -9.118398e-01 -1.4532894286 -1.943560480
#> [1369,] -5.188296e-01 -1.5385496136 -1.500800558
#> [1370,] -2.130232e+00 -2.9956364646 -4.318809155
#> [1371,] -9.079871e-01 -1.6164690640 -2.029314089
#> [1372,]  3.636846e-01  0.7092516460  0.847112205
#> [1373,] -1.767030e-02  0.1402262624  0.055785198
#> [1374,] -1.327024e+00 -2.5100924922 -3.047768065
#> [1375,] -6.201404e-01 -0.6893122940 -1.155841847
#> [1376,] -7.073571e-01 -2.5524998595 -2.298590436
#> [1377,] -4.216702e-01 -0.3093024389 -0.697464064
#> [1378,]  3.446225e-01  0.7647933696  0.854165494
#> [1379,] -1.506178e+00 -2.1252334187 -3.057588933
#> [1380,]  5.084916e-01  0.9521019898  1.162455454
#> [1381,]  4.403625e-01  0.1460954389  0.630199959
#> [1382,] -1.634382e+00 -2.3029325972 -3.316072532
#> [1383,]  3.024606e-02 -0.6644728347 -0.331038381
#> [1384,] -3.140774e+00 -5.1272060859 -6.761865691
#> [1385,]  9.806921e-01  1.4679962370  2.037579555
#> [1386,] -7.628637e-01 -0.6723295862 -1.324390292
#> [1387,] -1.228750e+00 -1.4829504839 -2.355201944
#> [1388,]  3.154250e+00  4.9734048070  6.693316970
#> [1389,] -2.433919e-01 -1.9037315886 -1.359996042
#> [1390,] -1.624521e-01 -0.3852352238 -0.416363880
#> [1391,]  7.274182e-01  1.5530633557  1.768960781
#> [1392,] -7.982434e-01 -2.0893478611 -2.154893865
#> [1393,]  1.192909e-01 -0.4516533269 -0.101895406
#> [1394,]  4.528421e-01  1.2838071350  1.277144106
#> [1395,] -1.383481e+00 -1.7598137488 -2.701795128
#> [1396,]  1.431162e+00  1.8530317332  2.812984507
#> [1397,]  2.962933e-01  0.8897501741  0.863245793

```

```

#> [1398,] 1.405801e-01 0.4836536215 0.443708066
#> [1399,] -3.903810e-01 -0.3266789848 -0.668090271
#> [1400,] 5.495816e-01 2.0634501893 1.830445499
#> [1401,] -4.962250e-01 0.2526513208 -0.478571490
#> [1402,] 7.191895e-02 0.2982848364 0.255217061
#> [1403,] -1.842609e+00 -3.9475576196 -4.488425015
#> [1404,] -3.572988e-01 -0.6011871251 -0.779178041
#> [1405,] -8.705618e-01 -2.0519931824 -2.224343064
#> [1406,] -9.003190e-01 -3.1440414378 -2.867490832
#> [1407,] 8.375347e-02 -0.6504315905 -0.256523437
#> [1408,] -7.682626e-01 -1.0381857409 -1.534157438
#> [1409,] 3.158599e-01 1.2690105876 1.098118578
#> [1410,] 4.008122e-01 1.5473680836 1.358529172
#> [1411,] -1.799654e+00 -2.7391429989 -3.764241630
#> [1412,] -2.003107e+00 -4.3591134139 -4.916959050
#> [1413,] 1.164345e+00 1.2774113993 2.160823708
#> [1414,] 7.892078e-01 1.7368622905 1.948011906
#> [1415,] -1.476550e+00 -2.0459453358 -2.976642358
#> [1416,] -3.753889e-01 -1.0695615426 -1.061664140
#> [1417,] -6.887961e-01 -1.1228704709 -1.482060824
#> [1418,] 5.183345e-01 1.0908203466 1.251712113
#> [1419,] 2.973955e-01 0.3725488587 0.577595118
#> [1420,] 1.272709e+00 -0.3334503943 1.401990813
#> [1421,] -3.978819e-01 -0.7668020798 -0.921693653
#> [1422,] 2.632060e-01 0.1880733419 0.432585349
#> [1423,] 1.642318e+00 2.9129941774 3.664526475
#> [1424,] 6.883339e-01 1.5042004179 1.693106547
#> [1425,] 4.309984e-01 1.3946314753 1.311408322
#> [1426,] 6.772867e-01 0.5600860084 1.155387013
#> [1427,] -7.738944e-01 -1.5458322505 -1.822902697
#> [1428,] -9.746379e-01 -1.1250229814 -1.839694179
#> [1429,] 7.503404e-01 0.3948097331 1.154762090
#> [1430,] 1.810163e-01 0.0787967914 0.269452541
#> [1431,] 2.575743e-01 0.6499095164 0.681862513
#> [1432,] -4.656735e-01 -1.0871220930 -1.183992634
#> [1433,] -5.239083e-01 -1.0046026001 -1.210815355
#> [1434,] -1.781103e-01 -0.4611771659 -0.478033898
#> [1435,] -1.173001e-01 0.2012813282 -0.034568073
#> [1436,] 1.595858e+00 3.1074494326 3.714506253
#> [1437,] -1.004978e+00 -0.9188859222 -1.763129911
#> [1438,] -5.728365e-01 -1.4075221335 -1.495431251
#> [1439,] -7.937139e-01 -1.6162866671 -1.886716485
#> [1440,] -1.018415e+00 -2.6424600013 -2.736397898
#> [1441,] -1.192948e+00 -2.0243012523 -2.610983903
#> [1442,] 4.737534e-01 -0.5316008289 0.295744629

```

```

#> [1443,] -1.429837e+00 -2.4729822141 -3.155379145
#> [1444,] -2.346352e+00 -3.0474448053 -4.617057312
#> [1445,] 5.258505e-01 1.2280082751 1.337218050
#> [1446,] 8.140855e-03 0.2620323490 0.155568463
#> [1447,] 6.211621e-01 1.2373860935 1.461273899
#> [1448,] -1.532818e-01 -0.6831362967 -0.570251313
#> [1449,] -8.421589e-01 -1.9320380376 -2.122355226
#> [1450,] -8.908856e-01 -1.7684138799 -2.092311846
#> [1451,] 1.677964e+00 1.4573534683 2.901157338
#> [1452,] -9.827231e-01 -1.0039257526 -1.782572395
#> [1453,] -7.886212e-01 -1.4629868183 -1.795291005
#> [1454,] 8.062366e-01 0.9818097869 1.550223911
#> [1455,] -9.296268e-01 -1.2518316917 -1.853939774
#> [1456,] 1.035157e+00 2.0502283143 2.428610205
#> [1457,] -9.974414e-01 -2.0841331026 -2.400395664
#> [1458,] 3.929258e-01 1.2352322736 1.175472714
#> [1459,] -3.004576e-01 0.2464669084 -0.237885715
#> [1460,] -9.980736e-01 -1.3932444170 -2.017769731
#> [1461,] 1.995241e-01 -0.0371782710 0.228170042
#> [1462,] 1.599815e+00 2.6903465648 3.487965912
#> [1463,] 7.333865e-01 1.9522045695 1.997909808
#> [1464,] -2.572437e+00 -4.2976376856 -5.592785834
#> [1465,] 5.722979e-02 1.0777001173 0.669442823
#> [1466,] -7.804787e-01 -2.5141276257 -2.368476582
#> [1467,] -9.514562e-01 -1.4239983327 -1.976705990
#> [1468,] -2.037252e+00 -2.5308928604 -3.944951285
#> [1469,] -6.524819e-01 -0.7057033315 -1.205267376
#> [1470,] -3.131013e-02 0.5128023528 0.245540738
#> [1471,] -7.003656e-01 -1.5546864741 -1.736127578
#> [1472,] 6.887091e-01 1.9990078419 1.968171895
#> [1473,] -7.605695e-02 -0.4913712646 -0.367531943
#> [1474,] 2.289569e-01 0.0511823895 0.313908684
#> [1475,] 9.561109e-01 0.2838675576 1.349785419
#> [1476,] -2.823777e-01 -0.5921713187 -0.680749493
#> [1477,] -2.429623e+00 -4.5787217589 -5.570689716
#> [1478,] 1.333758e+00 1.8521324107 2.691025111
#> [1479,] 4.709534e-01 -0.0726176388 0.546969573
#> [1480,] -4.582140e-01 -1.0317141141 -1.143941620
#> [1481,] 1.868539e-01 0.4519479555 0.483815254
#> [1482,] -8.924212e-01 -1.2118012467 -1.785329933
#> [1483,] -3.794987e-01 -0.4442973389 -0.719793613
#> [1484,] 9.865778e-01 1.8176102813 2.238940005
#> [1485,] -2.490368e+00 -2.9301951225 -4.731573631
#> [1486,] 1.886497e-01 0.4039858851 0.459437542
#> [1487,] 4.124584e-02 0.2677191601 0.200005641

```

```

#> [1488,] -2.943736e-01 -1.2083288413 -1.037649821
#> [1489,]  1.111257e+00  1.5991937489  2.273200819
#> [1490,]  2.735242e-01 -0.6248059394 -0.005662093
#> [1491,] -1.245420e+00 -2.3292024334 -2.845622888
#> [1492,] -1.658321e-01 -1.3657448614 -0.964720451
#> [1493,] -8.134064e-02  0.7631146347  0.322066554
#> [1494,]  6.848178e-01  2.1488110831  2.046453973
#> [1495,]  7.086792e-01  0.2418976489  1.017951552
#> [1496,] -1.541209e+00 -3.2107988938 -3.703715340
#> [1497,] -1.304247e-01  0.5092607265  0.119981431
#> [1498,] -3.556822e-01 -1.6541195262 -1.361495511
#> [1499,] -1.452748e+00 -2.4581234809 -3.175702390
#> [1500,]  7.830641e-01  0.9006180324  1.476270247
#> [1501,]  1.698590e+00  1.6025391591  3.007449489
#> [1502,] -3.117950e-01 -0.6059717350 -0.725090953
#> [1503,]  9.316173e-01  1.2422467824  1.851102749
#> [1504,]  7.167375e-01  0.1265704262  0.963998313
#> [1505,] -1.145035e+00 -2.0389709759 -2.559379345
#> [1506,] -1.968080e+00 -2.7388703888 -3.974114335
#> [1507,]  3.426689e-01  0.7001463899  0.815853054
#> [1508,] -8.832653e-02 -1.1820277897 -0.766117318
#> [1509,] -2.060423e+00 -3.9992640120 -4.788729612
#> [1510,] -1.354827e+00 -2.0819620828 -2.844843310
#> [1511,] -3.098805e-01 -0.3719266407 -0.592818380
#> [1512,] -3.508421e-01 -0.6253326664 -0.784526410
#> [1513,]  2.388791e+00  5.1802032999  5.853570128
#> [1514,]  9.619028e-02 -0.5985543391 -0.212225283
#> [1515,]  1.797848e+00  2.6879433542  3.733575241
#> [1516,]  5.634333e-01  0.6359376668  1.055508617
#> [1517,] -1.381969e+00 -4.1404445039 -4.021060235
#> [1518,] -6.335810e-02  0.0257698019 -0.064705093
#> [1519,]  4.965604e-01  0.8180974712  1.073210487
#> [1520,]  1.247473e+00  2.0396928874  2.687517010
#> [1521,] -6.097818e-01 -0.6980390392 -1.147767963
#> [1522,]  8.003451e-02 -1.0794289767 -0.499236484
#> [1523,] -4.467770e-01 -0.6158406175 -0.898887599
#> [1524,] -5.571559e-02 -0.3357915538 -0.255826459
#> [1525,] -1.303320e-01 -0.0803069050 -0.207088327
#> [1526,] -8.092167e-01 -2.5145165391 -2.404528162
#> [1527,] -8.675694e-02  0.2491077791  0.030060255
#> [1528,]  1.463896e+00  2.0654398308  2.971680937
#> [1529,] -4.212661e-01  0.0894509096 -0.475668681
#> [1530,]  1.402337e+00  1.4266293656  2.540404983
#> [1531,] -6.701313e-01 -0.3753471239 -1.043941942
#> [1532,]  1.663870e+00  2.8985429350  3.683382092

```

```

#> [1533,] -9.950655e-01 -0.4108492032 -1.468830512
#> [1534,]  3.865805e-01  1.7676972192  1.463055963
#> [1535,] -1.058771e+00 -2.1126028135 -2.492671472
#> [1536,] -7.744233e-02 -0.6649536037 -0.465590411
#> [1537,]  2.736293e-01  0.8201931213  0.796383011
#> [1538,] -6.771340e-02 -0.4688473827 -0.344627896
#> [1539,] -7.452970e-01 -1.3887593370 -1.700073505
#> [1540,]  6.121476e-01  1.0618823109  1.352635754
#> [1541,] -1.639920e+00 -3.5181387701 -3.997365965
#> [1542,]  1.438577e+00  2.4200794137  3.136918882
#> [1543,] -2.546919e-01 -0.1422063605 -0.396514192
#> [1544,] -2.958992e-01 -0.5124547074 -0.653371202
#> [1545,]  1.452238e+00  2.8394960841  3.386712096
#> [1546,] -4.842499e-02 -0.4283384224 -0.298094864
#> [1547,] -1.004605e+00 -1.3906705653 -2.024486319
#> [1548,]  1.221483e+00  3.0367003884  3.208405440
#> [1549,]  1.005396e+00  2.2958177318  2.527791422
#> [1550,]  8.877132e-01  1.6576166212  2.026868107
#> [1551,]  3.357000e-01  0.5427050348  0.719789688
#> [1552,] -1.922252e-01 -0.1924556728 -0.346505709
#> [1553,]  4.666927e-01  0.1993211582  0.692571169
#> [1554,] -4.590241e-01 -1.4023456823 -1.350636783
#> [1555,] -3.207710e+00 -6.4392315981 -7.573453209
#> [1556,]  8.124477e-01 -0.0043079378  1.010714959
#> [1557,] -6.566795e-02 -1.3085319402 -0.808067036
#> [1558,]  1.486634e-01  0.1683662342  0.278816385
#> [1559,]  1.090185e+00  0.9453078805  1.884044192
#> [1560,]  1.154122e+00  3.0006644614  3.104409897
#> [1561,]  5.723128e-01  2.0838814240  1.870129390
#> [1562,] -5.150518e-02 -0.8895769848 -0.557903886
#> [1563,] -1.602123e+00 -2.9251808884 -3.621168033
#> [1564,]  2.232019e+00  4.2570773575  5.145782331
#> [1565,] -2.594715e+00 -4.8389968331 -5.920996773
#> [1566,]  1.226666e+00  1.5514949790  2.390641787
#> [1567,] -7.173656e-03  0.4505133806  0.241070662
#> [1568,] -5.265150e-01 -0.2795918425 -0.811715222
#> [1569,] -1.530520e+00 -2.5709567134 -3.335300321
#> [1570,]  7.555519e-01  0.7959904591  1.383899166
#> [1571,] -1.927128e+00 -4.4854679617 -4.892335979
#> [1572,]  5.152067e-01 -0.1813847408  0.541791344
#> [1573,]  1.141977e+00  0.2146113159  1.543122793
#> [1574,] -5.851264e-01 -0.3909366174 -0.946594113
#> [1575,]  3.696794e-01  0.6925396027  0.845313132
#> [1576,]  1.386943e+00  2.2874190362  2.998910961
#> [1577,] -1.165248e+00 -1.4850830082 -2.277199060

```

```

#> [1578,] 8.493517e-01 -0.4553451037 0.806426781
#> [1579,] -8.330138e-02 0.9560992759 0.426719941
#> [1580,] 4.980438e-01 2.3588931867 1.930137402
#> [1581,] 1.231796e+00 1.7420020829 2.502762914
#> [1582,] 4.830125e-01 0.2122450144 0.720093814
#> [1583,] -8.369623e-01 -2.3915512516 -2.370885720
#> [1584,] 6.169939e-01 0.5661316546 1.083558124
#> [1585,] 5.133216e-01 1.1608996085 1.284352276
#> [1586,] 5.380176e-01 1.3351545668 1.411851876
#> [1587,] -7.376619e-01 -0.3717987796 -1.126182138
#> [1588,] 5.902194e-01 2.0361787356 1.865985557
#> [1589,] -2.568784e+00 -4.1789816477 -5.522380871
#> [1590,] 8.242307e-01 1.2854501713 1.741169876
#> [1591,] 1.288400e+00 1.9954553757 2.714002692
#> [1592,] -9.260222e-01 -2.0471709331 -2.290824905
#> [1593,] 1.168217e+00 1.6879996351 2.393512266
#> [1594,] 1.722618e+00 2.2630140911 3.403947263
#> [1595,] -1.394252e+00 -2.3714263396 -3.054645547
#> [1596,] -2.329312e-01 0.4824716606 -0.022708831
#> [1597,] -1.574646e+00 -2.9950605536 -3.625684668
#> [1598,] 2.124245e-01 0.7286232114 0.669244339
#> [1599,] -5.261365e-01 -0.6138310053 -0.996732020
#> [1600,] 1.229767e+00 2.9355955564 3.162627106
#> [1601,] 7.941006e-01 0.4466837951 1.238118114
#> [1602,] -8.358784e-01 -2.6882209408 -2.534173417
#> [1603,] -2.082754e+00 -3.8433620741 -4.730056702
#> [1604,] 3.598492e-01 1.2400479117 1.136899253
#> [1605,] -1.012195e+00 -0.0771381064 -1.304994701
#> [1606,] 9.442272e-01 0.9391956767 1.698646345
#> [1607,] -1.362473e+00 -2.4039939712 -3.033092267
#> [1608,] -5.940791e-01 -1.2818255568 -1.452163980
#> [1609,] 2.045903e-01 0.5053087006 0.535545152
#> [1610,] -2.681354e-01 1.5230304817 0.510858758
#> [1611,] 7.097917e-01 0.1444807948 0.965276604
#> [1612,] -1.538655e+00 -2.7539766302 -3.447013540
#> [1613,] -1.262225e-01 -0.1319079687 -0.230600338
#> [1614,] 1.834278e+00 3.9498835583 4.479327422
#> [1615,] -5.785051e-02 1.1602912879 0.571774676
#> [1616,] 4.850498e-01 0.5296186038 0.898763338
#> [1617,] -1.496232e+00 -3.3643127072 -3.732822954
#> [1618,] -4.884473e-01 -1.6220425169 -1.509249497
#> [1619,] -1.167538e+00 -1.7432607885 -2.423333183
#> [1620,] -2.140183e+00 -2.5939113478 -4.108277333
#> [1621,] 7.753856e-01 0.8609099077 1.444659020
#> [1622,] 4.259974e-01 -0.1035767717 0.473729278

```



```

#> [1623,] -6.613667e-01 -0.5784370700 -1.145719200
#> [1624,]  3.681027e-01  0.5650188633  0.772578397
#> [1625,] -2.334092e-01 -2.2845896923 -1.558908085
#> [1626,]  3.784101e-02  1.2450669565  0.738147006
#> [1627,]  3.085696e-01  1.0351626757  0.959251913
#> [1628,] -2.382587e+00 -3.1998492461 -4.746819723
#> [1629,] -3.354658e-01 -0.9408765321 -0.940466114
#> [1630,]  2.157225e+00  2.5681496078  4.115230497
#> [1631,]  2.623070e+00  3.8465667781  5.405598828
#> [1632,] -2.849974e-01  0.1347812463 -0.280587980
#> [1633,] -3.840003e-01 -1.4747341439 -1.297256282
#> [1634,]  4.939645e-01  1.6887459614  1.553146975
#> [1635,]  1.808605e+00  2.3117521883  3.538219586
#> [1636,] -1.447615e+00 -2.5444133747 -3.217189291
#> [1637,] -4.484966e-01  0.1241586939 -0.490363198
#> [1638,]  2.608667e-01 -0.2869279756  0.166062500
#> [1639,] -6.579636e-01 -0.7924730166 -1.260256592
#> [1640,]  1.887024e+00  4.7136359478  4.968951478
#> [1641,] -8.626792e-01 -1.9462948385 -2.155855461
#> [1642,]  1.015022e-01 -0.2992329317 -0.039490628
#> [1643,]  6.351954e-01  1.6363256432  1.700167917
#> [1644,]  8.010922e-01  0.4894068009  1.270545882
#> [1645,] -2.393365e-01 -1.6245398561 -1.199999381
#> [1646,] -1.440869e+00 -1.8601371367 -2.829032216
#> [1647,]  1.219688e+00  0.5728308652  1.838823549
#> [1648,]  8.038854e-01  2.5080394104  2.394285535
#> [1649,]  2.591389e+00  3.5358907960  5.193681007
#> [1650,]  8.342784e-02  0.7420458563  0.515837198
#> [1651,] -4.632394e-02  0.3465348354  0.134547316
#> [1652,] -5.048335e-02  0.0284811676 -0.047145848
#> [1653,] -5.668987e-01 -0.9356903369 -1.226180049
#> [1654,]  6.193960e-02  0.1447776879  0.157582979
#> [1655,]  3.424143e-01  1.1441260223  1.061925739
#> [1656,] -1.669315e+00 -2.4980159854 -3.467896273
#> [1657,] -2.375887e-01 -0.3364999159 -0.483011644
#> [1658,] -2.764891e+00 -4.9499392685 -6.194771799
#> [1659,]  1.023444e+00  3.1360430010  3.016586547
#> [1660,] -2.448995e-01 -0.5448167086 -0.607735101
#> [1661,] -5.895065e-01 -0.6891575318 -1.117556179
#> [1662,] -1.119559e+00 -2.4805626125 -2.772675781
#> [1663,]  2.048750e-01  1.1157852129  0.874688979
#> [1664,]  8.446352e-01  1.4935865703  1.882120937
#> [1665,]  2.546950e+00  4.9228829039  5.907988174
#> [1666,]  1.571047e+00  4.5358402275  4.476265136
#> [1667,]  3.247333e-01  1.6214844556  1.304791757

```

```

#> [1668,] -8.260324e-01 -1.3733120834 -1.792176268
#> [1669,] -1.958959e+00 -2.9001830446 -4.052261813
#> [1670,] -6.238054e-01 -1.0917592006 -1.383753309
#> [1671,] 6.216607e-01 1.1735774629 1.426484552
#> [1672,] -1.103634e-01 0.1039647242 -0.079924860
#> [1673,] 6.266150e-01 0.1740376225 0.877959725
#> [1674,] -7.519357e-02 -1.1322420164 -0.722111760
#> [1675,] 2.584962e-01 0.5416466006 0.622930729
#> [1676,] 1.475534e+00 2.6175228694 3.292576467
#> [1677,] 1.508669e+00 1.0207009683 2.447725539
#> [1678,] -4.812150e-02 0.1243836375 0.009021187
#> [1679,] -4.162624e+00 -5.7126428377 -8.360984671
#> [1680,] -8.561465e-02 0.6452816717 0.251344595
#> [1681,] -1.286242e+00 -0.2830651495 -1.761007241
#> [1682,] -2.918607e-01 -0.1532709535 -0.449003270
#> [1683,] -1.530989e+00 -2.2932957347 -3.181794675
#> [1684,] 4.186591e-01 0.6414963136 0.878062929
#> [1685,] -5.429633e-01 -0.6105664943 -1.015902994
#> [1686,] -7.618725e-01 -1.2844079147 -1.662832075
#> [1687,] 2.492311e-01 2.2412029100 1.554559819
#> [1688,] 4.757939e-01 1.0129436832 1.155446652
#> [1689,] 1.206748e-01 0.5479685381 0.454578608
#> [1690,] -3.742727e-02 0.3967517427 0.173509569
#> [1691,] 1.177878e-01 -0.5255497442 -0.144779087
#> [1692,] 2.721217e-01 1.3417241109 1.083930883
#> [1693,] -3.922211e-01 -1.9559641079 -1.574569870
#> [1694,] -5.326920e-01 0.3438232747 -0.473448505
#> [1695,] -1.745910e+00 -2.6830321959 -3.666084686
#> [1696,] -1.306346e+00 -2.8120324153 -3.189547198
#> [1697,] 2.474314e-01 0.8933785643 0.804329591
#> [1698,] 2.483752e+00 6.2267998805 6.552801325
#> [1699,] -8.455548e-01 -1.5956103266 -1.939886484
#> [1700,] -3.411164e-01 0.7771292291 0.005909041
#> [1701,] -1.830233e+00 -3.5161933313 -4.233603526
#> [1702,] -3.316919e-01 -0.5654371876 -0.727406962
#> [1703,] 2.104096e-01 -0.0269368720 0.247427600
#> [1704,] 9.184674e-01 0.9651579897 1.680932446
#> [1705,] -3.245708e+00 -5.0717842955 -6.861960109
#> [1706,] 3.000944e-01 0.0504475576 0.402207846
#> [1707,] 7.525096e-01 1.9453832934 2.017970462
#> [1708,] 1.421841e-02 -1.3730334321 -0.744246007
#> [1709,] -1.955447e-01 -0.0481985423 -0.270588461
#> [1710,] -8.894819e-01 -1.9707469884 -2.202847878
#> [1711,] 1.944025e+00 3.8103100135 4.538722189
#> [1712,] -1.247171e+00 -1.7929880697 -2.550229813

```

```

#> [1713,] 6.239727e-01 -0.3591143172 0.578787804
#> [1714,] -9.185800e-03 0.0039464912 -0.009264367
#> [1715,] -1.508304e+00 -3.3361813504 -3.732265035
#> [1716,] -1.473702e-02 -0.7779572101 -0.450110439
#> [1717,] 1.663375e-01 -0.2314615435 0.078968045
#> [1718,] -8.330953e-01 -1.3648232958 -1.796272677
#> [1719,] -7.569577e-01 -1.7607108083 -1.921031603
#> [1720,] -1.642653e+00 -2.6889831759 -3.540627502
#> [1721,] -3.043119e+00 -4.8556760293 -6.489404383
#> [1722,] 1.690766e+00 2.1686202337 3.311843769
#> [1723,] -1.065699e+00 -1.2216564221 -2.006872707
#> [1724,] 2.165113e-01 0.7751068428 0.700137065
#> [1725,] 8.415299e-02 0.5452263281 0.407514852
#> [1726,] -3.337123e-01 -0.3627063332 -0.617419252
#> [1727,] -2.131711e+00 -3.5858541540 -4.648198855
#> [1728,] -2.616977e+00 -5.2300515933 -6.165777110
#> [1729,] -1.327909e+00 -2.4939566890 -3.039916623
#> [1730,] -4.839332e-01 -0.3853638574 -0.817315589
#> [1731,] -7.038514e-01 0.5623494003 -0.565608002
#> [1732,] -5.456629e-01 -1.0446828723 -1.260185817
#> [1733,] 6.566875e-01 0.7627808518 1.242187388
#> [1734,] -1.617749e+00 -2.5932392310 -3.456439411
#> [1735,] -9.374731e-01 -0.7980093501 -1.611871599
#> [1736,] -1.665045e+00 -2.1239381042 -3.254974277
#> [1737,] 1.231331e+00 1.1091265794 2.150964061
#> [1738,] -5.186382e-01 0.1108901223 -0.585191846
#> [1739,] -1.078642e+00 -0.2149490879 -1.464332572
#> [1740,] 3.438525e-01 -0.9066529591 -0.074377398
#> [1741,] 1.519618e+00 2.4753802928 3.268664974
#> [1742,] -3.582284e-01 -0.7197556447 -0.846137768
#> [1743,] -1.190144e+00 -1.2105086373 -2.155867386
#> [1744,] 9.790336e-01 1.7705875331 2.203436841
#> [1745,] 3.521075e-01 -0.1960424988 0.330275491
#> [1746,] 1.419671e+00 1.5331970677 2.621161079
#> [1747,] 7.824378e-01 1.1237991023 1.599345425
#> [1748,] -4.879358e-01 -1.9342226901 -1.681858600
#> [1749,] 1.009199e-01 0.8702579985 0.608801771
#> [1750,] -2.552377e+00 -4.6289964214 -5.751661323
#> [1751,] -3.347791e-01 -0.2994747049 -0.583658614
#> [1752,] 1.576949e+00 2.1307708209 3.148911890
#> [1753,] -1.347487e+00 -2.1765550585 -2.888185444
#> [1754,] 5.964727e-01 1.3485348322 1.492169620
#> [1755,] -1.882355e-01 0.0192372744 -0.224049991
#> [1756,] 7.932657e-01 1.7621943353 1.967130187
#> [1757,] -6.743889e-01 -1.0133757250 -1.403330361

```

```

#> [1758,] 1.673494e-01 -1.2954593493 -0.510244396
#> [1759,] -4.567731e-01 -0.6384220556 -0.923884285
#> [1760,] -8.840507e-01 -0.8170849500 -1.555841142
#> [1761,] -1.492206e+00 -3.5441812543 -3.827623121
#> [1762,] -5.804046e-01 -0.8388731052 -1.189292174
#> [1763,] -6.178293e-01 0.2936022903 -0.607483537
#> [1764,] -1.407136e+00 -2.5684881441 -3.180072965
#> [1765,] 3.762604e-02 -0.2598167294 -0.097268498
#> [1766,] 2.529590e+00 3.3900731254 5.035695909
#> [1767,] -5.906350e-01 0.2920793507 -0.574418036
#> [1768,] 5.076029e-02 0.9281750452 0.578395342
#> [1769,] 1.208541e+00 1.8384316323 2.527278188
#> [1770,] 4.135030e-01 0.7023578232 0.905408987
#> [1771,] -4.205681e-01 -1.3980133009 -1.300278658
#> [1772,] -1.662920e+00 -1.8280681959 -3.088129177
#> [1773,] -9.854012e-01 -0.6071754051 -1.565732072
#> [1774,] 5.339677e-01 0.9126253013 1.172315672
#> [1775,] -7.428223e-01 -0.9508795272 -1.453982535
#> [1776,] -3.573523e-01 0.1500420644 -0.362343956
#> [1777,] 1.418764e+00 3.1249399194 3.503380874
#> [1778,] -2.797424e-01 -0.5281852202 -0.641953754
#> [1779,] -1.196925e+00 -2.2980600262 -2.767868524
#> [1780,] -3.198579e-01 -0.9056420409 -0.901449707
#> [1781,] 1.694280e+00 1.9116839003 3.173636803
#> [1782,] 3.354007e-01 0.0507947277 0.446426749
#> [1783,] -2.599811e-01 -1.0928653890 -0.930685634
#> [1784,] -7.967757e-01 -0.3394454116 -1.181941004
#> [1785,] 1.792560e-01 0.0617536139 0.257799280
#> [1786,] -2.246431e+00 -3.4672738511 -4.725445201
#> [1787,] -4.758347e-02 0.5626267034 0.252898644
#> [1788,] -1.361803e-01 -0.6142525755 -0.510698510
#> [1789,] 7.193406e-01 1.5176821449 1.739253092
#> [1790,] -4.219322e-01 0.1954280437 -0.417686410
#> [1791,] 6.631717e-02 0.2001439624 0.193767674
#> [1792,] 9.395082e-01 0.4142652833 1.401447410
#> [1793,] 1.638262e-01 -0.4111288183 -0.023871364
#> [1794,] -1.272077e+00 -0.4467795291 -1.834198337
#> [1795,] 4.631803e-01 -0.5697755448 0.261374857
#> [1796,] -4.558878e-01 -0.4115190634 -0.796858602
#> [1797,] -1.155119e+00 -2.0110107924 -2.556437223
#> [1798,] -7.153261e-01 -0.3932442288 -1.110231163
#> [1799,] 3.222728e-01 0.2025483065 0.514273404
#> [1800,] 4.546169e-01 0.3839559873 0.779977477
#> [1801,] 1.752071e+00 3.0035770321 3.851656385
#> [1802,] -1.151965e+00 -2.9544080598 -3.076049445

```

```

#> [1803,] 3.457584e-01 1.3129378900 1.159779237
#> [1804,] -4.119475e-01 -0.6367146371 -0.867040061
#> [1805,] -2.744271e-01 0.2908269171 -0.180808286
#> [1806,] -2.842117e-01 -1.2134849998 -1.027839557
#> [1807,] -6.997963e-02 0.1325378951 -0.013710185
#> [1808,] -2.913396e-01 0.0501476768 -0.335464733
#> [1809,] 1.651802e+00 2.9455536110 3.694421914
#> [1810,] -4.382715e-01 -0.5944123818 -0.876389651
#> [1811,] 8.105368e-01 1.4595487907 1.820711360
#> [1812,] -2.146460e+00 -3.7561851817 -4.761117898
#> [1813,] 3.185134e-01 1.0182134129 0.962245491
#> [1814,] 1.726807e-01 0.8150560038 0.667651242
#> [1815,] 1.226604e-01 -0.3554563805 -0.044308451
#> [1816,] -6.462394e-01 -1.5345384112 -1.657451925
#> [1817,] 1.234101e+00 1.1348546258 2.168696136
#> [1818,] -5.600042e-01 -0.8974885957 -1.196382413
#> [1819,] -1.197461e+00 -2.4843056772 -2.871895410
#> [1820,] 1.213007e+00 1.2564355798 2.209864359
#> [1821,] 1.093193e+00 2.2537560482 2.613929080
#> [1822,] 1.923324e+00 2.9397184273 4.029766128
#> [1823,] -1.607804e+00 -2.7446875053 -3.528085432
#> [1824,] 9.694197e-01 2.1547678663 2.404652493
#> [1825,] 9.442478e-01 0.0710095628 1.216865043
#> [1826,] -1.027465e+00 -1.9514825253 -2.364218580
#> [1827,] 5.183916e-01 0.3375828268 0.833768130
#> [1828,] -1.133346e+00 -1.2929972444 -2.130818259
#> [1829,] 4.664761e-01 1.0572679359 1.168425566
#> [1830,] -6.095483e-01 -0.7497174965 -1.176156102
#> [1831,] 2.054762e+00 2.9293339836 4.187903440
#> [1832,] -4.535550e-01 0.2219061536 -0.442425200
#> [1833,] 3.414260e-01 0.0904987214 0.475974209
#> [1834,] -5.225872e-01 -0.9664292077 -1.187983284
#> [1835,] 2.807482e+00 5.1029475211 6.332794991
#> [1836,] -1.502737e+00 -3.0961540963 -3.592117987
#> [1837,] 6.942257e-01 0.4410849372 1.110468992
#> [1838,] -5.700965e-01 -1.7148642167 -1.662576587
#> [1839,] -1.087937e+00 -1.8307724662 -2.372637004
#> [1840,] -1.931179e+00 -4.2566813496 -4.770420374
#> [1841,] 2.657635e-01 1.2192190096 1.008017163
#> [1842,] -1.023195e+00 -1.6448464946 -2.188723915
#> [1843,] -1.184226e+00 -2.3419486434 -2.776388953
#> [1844,] 6.383860e-01 0.5090497149 1.078555655
#> [1845,] 2.976158e+00 5.0466432934 6.511884134
#> [1846,] -8.664627e-01 -1.4640509757 -1.892948353
#> [1847,] 2.707092e-01 0.5671564860 0.652316901

```

```

#> [1848,] 1.599642e+00 2.7688219877 3.531300779
#> [1849,] -5.679944e-01 -1.4181438006 -1.495287889
#> [1850,] -3.420655e-01 1.0365625088 0.148700152
#> [1851,] 1.781018e-01 -0.4715950064 -0.039626221
#> [1852,] 1.006569e+00 1.9836753415 2.356027559
#> [1853,] 8.413007e-01 1.2223480144 1.727436820
#> [1854,] -5.256051e-01 -0.7978647655 -1.098200363
#> [1855,] 8.832597e-01 1.7959956849 2.098109188
#> [1856,] -2.286089e+00 -4.2421205987 -5.204905773
#> [1857,] -4.863298e-01 -1.9127647620 -1.667947762
#> [1858,] -9.518880e-01 -1.4173336105 -1.973545693
#> [1859,] 6.100916e-01 1.1905040934 1.421451692
#> [1860,] -1.726063e+00 -2.4527730318 -3.513551323
#> [1861,] 1.980609e+00 2.7634558377 4.003380786
#> [1862,] 1.981767e-02 -0.0675257971 -0.012761756
#> [1863,] 2.207322e-01 0.6983375886 0.662796643
#> [1864,] 7.568137e-01 1.0566685406 1.530138074
#> [1865,] 1.245167e+00 2.5241990787 2.953523131
#> [1866,] -3.001144e-01 0.1176940031 -0.308921323
#> [1867,] -1.172445e+00 -1.8872043604 -2.509334182
#> [1868,] 2.317781e-01 1.6743961670 1.218242318
#> [1869,] -8.306281e-01 -2.4798128651 -2.411968579
#> [1870,] -8.494284e-01 -0.5099515742 -1.342221700
#> [1871,] -6.920945e-01 -1.0001160503 -1.418050204
#> [1872,] -7.019204e-01 -1.7094091083 -1.823930948
#> [1873,] 7.083018e-01 0.8472281507 1.353413988
#> [1874,] 1.513100e+00 2.6190729446 3.340280728
#> [1875,] 5.393668e-01 0.7220872918 1.073307599
#> [1876,] 1.570542e+00 2.4400138201 3.312539766
#> [1877,] 1.385532e+00 2.6793681422 3.214667674
#> [1878,] 4.897640e-01 0.8173910028 1.064343517
#> [1879,] 2.245749e+00 4.0861126886 5.068024928
#> [1880,] 1.850450e-01 -1.2231174897 -0.448031640
#> [1881,] 1.502703e+00 2.0956481569 3.036837162
#> [1882,] 1.786055e+00 1.7843490377 3.217413023
#> [1883,] -1.306063e-01 1.1272612394 0.462719364
#> [1884,] -4.985731e-01 -1.2851109972 -1.334893306
#> [1885,] -1.539934e+00 -2.7664346300 -3.455521956
#> [1886,] -4.162679e-01 -0.8090390793 -0.968060354
#> [1887,] 8.996779e-01 0.8126721776 1.572878973
#> [1888,] 1.084997e+00 1.8917872891 2.402831385
#> [1889,] -2.470742e-01 -1.7607040242 -1.285213469
#> [1890,] 1.584463e+00 1.9397306842 3.052261801
#> [1891,] -1.936260e+00 -4.4039497322 -4.858484445
#> [1892,] 5.618165e-01 0.9113296334 1.206323555

```

```

#> [1893,] -1.680325e+00 -1.8004579217 -3.094509994
#> [1894,]  1.342447e-01  0.1366046405  0.243210307
#> [1895,] -2.205224e+00 -2.5215234527 -4.149209379
#> [1896,]  3.464779e-01  1.0851931686  1.034287624
#> [1897,]  8.616328e-01  1.6485736347  1.989327859
#> [1898,] -1.491266e-01  0.1911124485 -0.079898374
#> [1899,] -1.251428e+00 -2.7310706847 -3.076135650
#> [1900,] -6.581081e-01 -0.2543508525 -0.961801402
#> [1901,]  5.184317e-02  0.2705653547  0.214799817
#> [1902,]  3.259528e-01  1.5485174610  1.265818844
#> [1903,]  2.168287e-01  1.2694548573  0.974875214
#> [1904,]  1.477220e+00  2.9611431909  3.485373648
#> [1905,]  1.645627e+00  2.7676437325  3.587989726
#> [1906,]  3.425769e-01 -0.2825448796  0.270385867
#> [1907,]  1.792409e-01  0.0384298558  0.244836739
#> [1908,]  6.083347e-01  1.2244351384  1.438091230
#> [1909,] -1.308000e+00 -2.4281036078 -2.978545553
#> [1910,] -4.943796e-01 -0.1909064223 -0.722426328
#> [1911,] -9.786356e-01 -2.1123511485 -2.392605065
#> [1912,]  2.857161e-01  0.5568770712  0.665325561
#> [1913,] -1.946338e+00 -1.8946928540 -3.478518825
#> [1914,]  3.849135e-01  0.8018557345  0.924975695
#> [1915,] -4.767156e-02  0.1975269506  0.050173721
#> [1916,] -8.549068e-01 -1.6380243526 -1.975086318
#> [1917,] -4.533790e-01 -0.2550966835 -0.706922355
#> [1918,]  3.534257e-01  0.4441079691  0.687175914
#> [1919,]  2.094577e+00  4.0226574468  4.844300802
#> [1920,]  4.806472e-01  1.0075764994  1.158519984
#> [1921,] -2.892735e+00 -4.4175286744 -6.058725344
#> [1922,] -1.011067e+00 -0.9719458506 -1.800168574
#> [1923,]  9.390341e-01  0.9397931712  1.692502261
#> [1924,] -8.077082e-01 -1.0493995387 -1.589568401
#> [1925,] -5.354221e-01 -0.4108082768 -0.895641794
#> [1926,] -1.615704e-01  0.8420010072  0.265800284
#> [1927,] -6.045557e-01 -1.2092156535 -1.424932666
#> [1928,] -1.218597e+00 -2.7957586602 -3.071094204
#> [1929,]  5.907800e-01  0.7880813965  1.174042828
#> [1930,] -4.050491e-01 -1.2733691101 -1.211754478
#> [1931,] -2.354610e+00 -3.6489655353 -4.961173392
#> [1932,]  1.251537e+00  1.5532219781  2.422614775
#> [1933,] -1.014775e+00 -2.7121171565 -2.770514642
#> [1934,]  9.893625e-02  1.0348772313  0.697685022
#> [1935,] -7.161154e-01 -1.3875481892 -1.663012412
#> [1936,]  6.644394e-01  0.3438304733  1.019353847
#> [1937,]  2.214262e-01  1.3179067710  1.007497030

```

```

#> [1938,] -1.386690e+00 -2.1737317325 -2.935503872
#> [1939,]  8.644289e-01  1.6334770308  1.984436558
#> [1940,]  1.097050e-01 -0.2360071705  0.005825856
#> [1941,]  1.265274e-01 -0.8702786002 -0.325191124
#> [1942,] -8.372518e-01 -1.2919386918 -1.761007851
#> [1943,] -3.347568e-01 -1.3904009241 -1.189049218
#> [1944,]  2.161592e-01  0.1696572965  0.363698797
#> [1945,] -1.084723e+00 -0.8298860991 -1.813179997
#> [1946,]  3.306022e-02  0.3226199251  0.220265967
#> [1947,] -6.629877e-01 -1.8393806530 -1.847511341
#> [1948,]  1.089397e+00  1.7300331242  2.318552106
#> [1949,] -7.923771e-01 -2.8004096705 -2.542188160
#> [1950,]  1.480753e+00  1.4980399353  2.677818209
#> [1951,] -1.587792e+00 -2.3974445248 -3.310425286
#> [1952,]  5.830965e-01  2.8900480422  2.330965111
#> [1953,]  6.562020e-01  0.6533309581  1.180841893
#> [1954,] -1.621898e-01 -0.8813655537 -0.691368353
#> [1955,]  9.499440e-01  1.9509026061  2.267229998
#> [1956,]  6.908838e-01  2.1475779399  2.053333877
#> [1957,]  5.214413e-01  1.1368250658  1.281116941
#> [1958,] -9.223656e-01 -1.0189435270 -1.715642067
#> [1959,] -9.539502e-01 -1.2505358122 -1.883551432
#> [1960,] -1.531442e+00 -3.0818437968 -3.619970852
#> [1961,] -3.395726e-02  1.1724339351  0.608307739
#> [1962,] -7.871690e-01 -1.0226524282 -1.549113002
#> [1963,] -2.186513e+00 -3.6101488035 -4.730018497
#> [1964,] -3.893720e-01 -1.2465786839 -1.177337982
#> [1965,] -2.806200e+00 -4.4052940609 -5.944027934
#> [1966,]  4.119151e-01  0.9703087646  1.052130447
#> [1967,]  7.796729e-01  0.8173819376  1.425848962
#> [1968,]  6.860902e-01  0.2260355623  0.980980813
#> [1969,]  1.296920e+00  1.4925881478  2.445556781
#> [1970,]  1.645752e+00  2.3462460143  3.354287407
#> [1971,] -4.638702e-01 -0.7246752698 -0.980601113
#> [1972,] -9.349258e-01 -0.2048858263 -1.279536414
#> [1973,] -5.216834e-01 -0.8416500049 -1.117609076
#> [1974,] -7.057597e-02  0.2980869487  0.077418987
#> [1975,] -1.408524e+00 -3.3066748157 -3.591467146
#> [1976,] -4.285182e-02 -0.2529623960 -0.193818884
#> [1977,] -1.594761e+00 -2.9523940715 -3.627089839
#> [1978,]  1.439954e+00  2.2265592977  3.031240020
#> [1979,] -1.702954e+00 -2.6458116710 -3.591863386
#> [1980,] -3.977133e-01  0.9812809438  0.048629498
#> [1981,]  1.618050e+00  3.6272844437  4.030666598
#> [1982,] -1.460555e+00 -3.1236674340 -3.554786792

```



```

#> [1983,] -4.506009e-01 -1.3024276916 -1.284683013
#> [1984,] -1.983810e-01  0.8990881290  0.251579235
#> [1985,] -5.258611e-01 -0.1834056624 -0.757520482
#> [1986,] -1.139864e+00 -1.5954386813 -2.306788704
#> [1987,]  3.660857e-02  0.0449265396  0.070582492
#> [1988,]  2.295783e+00  3.8844758685  5.018516275
#> [1989,] -5.540542e-01 -0.6766618100 -1.066413279
#> [1990,] -1.228960e+00 -2.4142150343 -2.872276672
#> [1991,]  1.904886e+00  2.5395997793  3.784725775
#> [1992,] -2.819741e-01 -0.7869651607 -0.788348693
#> [1993,]  3.961480e+00  5.6490117315  8.074849871
#> [1994,] -1.631457e+00 -2.1341136753 -3.218737342
#> [1995,] -1.214776e+00 -1.9786218079 -2.612853469
#> [1996,]  3.992245e-01  1.0953806010  1.105715126
#> [1997,]  2.540290e+00  3.5350541849  5.129497190
#> [1998,] -1.163480e+00 -0.7396546999 -1.861313802
#> [1999,]  6.990512e-01  2.0548380063  2.012051633
#> [2000,] -4.494133e-01 -1.2760224599 -1.268548255
#>
#> [[1]][[21]]$value[[1]]$decomposition
#> [1] "eigen"
#>
#>
#>
#> [[1]][[21]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[22]]
#> [[1]][[22]]$value
#> [[1]][[22]]$value[[1]]
#> [[1]][[22]]$value[[1]]$M
#> [1] 2
#>
#> [[1]][[22]]$value[[1]]$est
#> [1] 0 0 0
#>
#> [[1]][[22]]$value[[1]]$within
#>      [,1] [,2] [,3]
#> [1,]    1    0    0
#> [2,]    0    1    0
#> [3,]    0    0    1
#>
#> [[1]][[22]]$value[[1]]$between
#>      [,1] [,2] [,3]

```

```

#> [1,] 0 0 0
#> [2,] 0 0 0
#> [3,] 0 0 0
#>
#> [[1]][[22]]$value[[1]]$total
#>      [,1] [,2] [,3]
#> [1,] 1 0 0
#> [2,] 0 1 0
#> [3,] 0 0 1
#>
#> [[1]][[22]]$value[[1]]$ariv
#> [1] NA
#>
#> [[1]][[22]]$value[[1]]$total_adj
#> [1] NA
#>
#>
#>
#> [[1]][[22]]$visible
#> [1] TRUE
#>
#>
#> [[1]][[23]]
#> [[1]][[23]]$value
#> [[1]][[23]]$value[[1]]
#>      est se R 0.05% 0.5% 2.5% 97.5% 99.5% 99.95%
#> eta1=~y1 1.0000 NA 0 NA NA NA NA NA NA
#> eta1=~y2 0.7039 NA 0 NA NA NA NA NA NA
#> eta1=~y3 0.7047 NA 0 NA NA NA NA NA NA
#> eta1=~y4 0.8566 NA 0 NA NA NA NA NA NA
#> y1~~y1 0.0000 NA 0 NA NA NA NA NA NA
#> y2~~y2 0.5045 NA 0 NA NA NA NA NA NA
#> y3~~y3 0.5034 NA 0 NA NA NA NA NA NA
#> y4~~y4 0.2662 NA 0 NA NA NA NA NA NA
#> eta1~~eta1 1.0000 NA 0 NA NA NA NA NA NA
#>
#>
#> [[1]][[23]]$visible
#> [1] TRUE

```

Environment

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

Class

```
#> [[1]]  
#> [1] "root_criterion"
```

References

- Pesigan, I. J. A., & Cheung, S. F. (2023). Monte Carlo confidence intervals for the indirect effect with missing data. *Behavior Research Methods*, 56(3), 1678–1696. <https://doi.org/10.3758/s13428-023-02114-4>
- R Core Team. (2024). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria. <https://www.R-project.org/>