```
R version 4.4.0 (2024-04-24) -- "Puppy Cup"
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Platform: aarch64-apple-darwin20

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[R.app GUI 1.80 (8376) aarch64-apple-darwin20]

[History restored from /Users/alperkaragol/.Rapp.history]

> # Load necessary libraries
> library(ggplot2)
>
> # Given data
> x10 <-
c(0.8255,0.8161,0.8302,0.8979,0.8312,0.8174,0.7616,0.5319,0.5952,0.7722,0.5177,0.3788,0.3827,0.6425,0.2157,0.3378,0.244
9,0.2911,0.9377,0.9401,0.8324,0.9516,0.8923,0.9155,0.8958,0.801,0.8656,0.9559,0.8261,0.6915,0.8009,0.882,0.5534,0.5188,
0.4166,0.5028,0.8929,0.6325,0.6194,0.6427,0.7078,0.5041,0.237,0.1452,0.5404,0.9389,0.9547,0.8842,0.9758,0.8161,0.917,0.
9353,0.3433,0.5157,0.966,0.8736,0.784,0.8755,0.8318,0.7998,0.5021,0.389,0.7264,0.9585,0.9307,0.9295,0.8993,0.7739,0.896
9,0.8423,0.4937,0.858,0.9799,0.9857,0.9384,0.9895,0.937,0.9733,0.9669,0.7165,0.8447,0.959,0.9433,0.8916,0.9095,0.725,0.
8856,0.8308,0.6972,0.8313,0.9787,0.9805,0.9365,0.9792,0.9447,0.9686,0.954,0.8703,0.9196,0.9694,0.9209,0.9414,0.8983,0.7
762,0.8797,0.8364,0.481,0.8901,0.941,0.8139,0.7159,0.8389,0.774,0.7322,0.3417,0.2374,0.6922,0.9866,0.9894,0.957,0.9911,
0.9528,0.9768,0.9767,0.6762,0.7462,0.9579,0.8046,0.6731,0.8353,0.845,0.6927,0.382,0.3016,0.6772,0.9106,0.949,0.878,0.96
76,0.7552,0.9111,0.9234,0.1419,0.1875,0.9566,0.9706,0.8404,0.9757,0.8864,0.9256,0.9321,0.5818,0.7531,0.9326,0.8283,0.61
47,0.8533,0.765,0.7218,0.3639,0.2509,0.43,0.9697,0.9573,0.8814,0.9624,0.9229,0.9063,0.9148,0.7818,0.8495,0.9564,0.9357,
0.8183,0.8385,0.7087,0.8094,0.7437,0.7703,0.6319,0.9715,0.8715,0.6457,0.8171,0.88,0.6314,0.6242,0.4621,0.5934,0.768,0.6
383,0.5715,0.4107,0.3322,0.4598,0.3147,0.1863,0.4697,0.9801,0.9159,0.7905,0.8894,0.8982,0.7759,0.6886,0.5706,0.7397,0.9
284,0.8253,0.6206,0.8201,0.6969,0.6924,0.2025,0.1933,0.5449,0.9704,0.9791,0.9192,0.9848,0.9122,0.9569,0.9575,0.4979,0.6
512,0.943,0.8671,0.7163,0.8842,0.7652,0.7811,0.2631,0.2144,0.6021,0.979,0.9846,0.9439,0.9887,0.9168,0.9677,0.9709,0.42,
0.5357,0.9689,0.8589,0.6684,0.8628,0.8505,0.6858,0.5278,0.5422,0.7134,0.9733,0.9783,0.9392,0.984,0.9279,0.9647,0.9604,0
.6099,0.6866,0.9902,0.9932,0.9598,0.9929,0.9657,0.9868,0.9776,0.8616,0.9229,0.9508,0.9607,0.7805,0.956,0.8548,0.9085,0.
891,0.6023,0.7325,0.9766,0.886,0.7492,0.8666,0.9021,0.7803,0.7795,0.7198,0.8121,0.2779,0.1502,0.1036,0.1146,0.1869,0.70
5,0.1332,0.123,0.1919,0.9758,0.9536,0.9665)
> x11 <-
c(0.9111,0.8063,0.9298,0.8868,0.7812,0.9391,0.9897,0.9929,0.9569,0.9943,0.962,0.9845,0.9777,0.7416,0.8663,0.9922,0.9938
,0.954,0.9923,0.9649,0.9836,0.9708,0.7615,0.8307,0.9917,0.993,0.9549,0.9945,0.9687,0.9796,0.976,0.6863,0.8337,0.9708,0.
9736,0.9399,0.9597,0.7224,0.9397,0.925,0.5297,0.8591,0.9836,0.9862,0.9447,0.9884,0.9372,0.969,0.9652,0.4629,0.5703,0.93
41,0.603,0.6624,0.7371,0.6877,0.5838,0.4089,0.3015,0.8287,0.8348,0.5057,0.2516,0.303,0.5572,0.18,0.3411,0.2938,0.3104,0
.6851,0.7947,0.6992,0.8743,0.6118,0.7855,0.7439,0.3932,0.4927,0.344,0.2954,0.2312,0.228,0.1358,0.1945,0.1548,0.1197,0.2
809,0.9477,0.9541,0.9014,0.976,0.8976,0.9335,0.9248,0.7596,0.8873,0.9719,0.9804,0.9617,0.9918,0.9835,0.9809,0.9517,0.94
48,0.9671,0.4567,0.241,0.2962,0.329,0.4281,0.1472,0.2107,0.1191,0.3485,0.9809,0.9707,0.9403,0.9901,0.983,0.9707,0.9551,
0.9284,0.9113,0.9757,0.8984,0.8278,0.8857,0.9097,0.6807,0.5748,0.4185,0.5797,0.9932,0.9461,0.9363,0.9763,0.9745,0.8859,
0.7981,0.6225,0.8786,0.9965,0.9975,0.9856,0.999,0.9849,0.9912,0.993,0.8362,0.9252,0.9976,0.9922,0.9933,0.9923,0.9815,0.
984,0.9835,0.8913,0.9562,0.9962,0.9956,0.9852,0.9985,0.9915,0.9908,0.9895,0.9048,0.902,0.9981,0.9933,0.996,0.9948,0.988
8,0.9893,0.9877,0.9614,0.9866,0.8687,0.4715,0.7201,0.4828,0.7478,0.2953,0.7517,0.5426,0.7652,0.9985,0.9989,0.9909,0.999
,0.9968,0.9977,0.9954,0.9961,0.9977,0.9905,0.9884,0.9591,0.9931,0.9804,0.9822,0.9762,0.8912,0.8653,0.9861,0.9179,0.926,
0.951,0.9208,0.8687,0.5904,0.2406,0.9278,0.9752,0.9085,0.8558,0.9351,0.8859,0.8184,0.4401,0.2315,0.7301,0.9974,0.9975,0
.9886,0.9987,0.9913,0.9937,0.9928,0.8822,0.9135,0.9892,0.9588,0.9145,0.9745,0.9588,0.9032,0.5809,0.3455,0.8266,0.9946,0
.9954,0.9749,0.9982,0.9816,0.9897,0.9906,0.8873,0.9576,0.9883,0.9625,0.8861,0.9772,0.9375,0.9114,0.6131,0.4078,0.7777,0
.9331,0.8522,0.6172,0.8418,0.7925,0.6272,0.3451,0.2852,0.3669,0.9684,0.8582,0.8506,0.8838,0.9168,0.6636,0.6447,0.3862,0
.847,0.9935,0.9802,0.9699,0.9942,0.9908,0.9696,0.9752,0.9793,0.9843,0.9873,0.9817,0.9614,0.9796,0.9372,0.9553,0.9375,0.
9483,0.8473,0.9616,0.7679,0.652,0.656,0.8342,0.3477)
> x12 <-
c(0.554,0.3905,0.61,0.9715,0.9006,0.8303,0.9089,0.9132,0.7195,0.4507,0.2721,0.6858,0.9978,0.9854,0.9825,0.9889,0.9885,0
.9576,0.8939,0.6155,0.9547,0.9947,0.9943,0.9764,0.9973,0.9787,0.9866,0.9866,0.6866,0.6583,0.981,0.953,0.8894,0.9668,0.9
199,0.8924,0.4244,0.2538,0.7413,0.9983,0.9985,0.9925,0.9991,0.9931,0.9954,0.9953,0.8384,0.814,0.9917,0.9568,0.8935,0.97
43,0.9477,0.8819,0.6182,0.4704,0.8466,0.9961,0.9966,0.9909,0.9982,0.9915,0.9936,0.9937,0.9333,0.9203,0.9986,0.9988,0.98
96,0.9993,0.9956,0.9972,0.9949,0.9767,0.9821,0.9958,0.9938,0.9278,0.9949,0.9842,0.982,0.9775,0.9324,0.9378,0.9979,0.987
2,0.9626,0.9893,0.9872,0.9604,0.9647,0.9037,0.9591,0.9972,0.9913,0.9969,0.9918,0.9758,0.9902,0.9849,0.9219,0.993,0.9991
,0.9993,0.9941,0.9996,0.9962,0.9976,0.9969,0.9489,0.9698,0.9991,0.9991,0.9899,0.9992,0.9945,0.9966,0.9942,0.9301,0.9375
,0.9993,0.9993,0.9924,0.9996,0.9966,0.9967,0.9962,0.9205,0.9433,0.9929,0.9918,0.9867,0.994,0.9157,0.9831,0.9874,0.7037,
0.9682,0.9893,0.9746,0.9261,0.9812,0.9408,0.9351,0.5923,0.3904,0.8002,0.989,0.8721,0.9432,0.961,0.8525,0.9101,0.6959,0.
5642,0.9789,0.9815,0.889,0.6359,0.8381,0.8999,0.5804,0.5831,0.4821,0.354,0.9916,0.9904,0.8692,0.9899,0.9793,0.9699,0.95
52,0.9541,0.9818,0.8377,0.4082,0.4252,0.4768,0.6923,0.2431,0.4776,0.3937,0.5956,0.936,0.8062,0.7246,0.8581,0.8316,0.585
1,0.7217,0.6047,0.7568,0.9882,0.989,0.9564,0.9963,0.9865,0.9779,0.9787,0.9557,0.9699,0.5027,0.3327,0.2171,0.4526,0.3206
```

```
,0.2551,0.2698,0.2467,0.2432,0.9929,0.9928,0.9812,0.9973,0.9866,0.9877,0.985,0.9635,0.984,0.6077,0.2964,0.2563,0.3142,0
.326,0.197,0.1655,0.137,0.4137,0.3106,0.323,0.2322,0.2372,0.1452,0.2476,0.1591,0.1754,0.218,0.6553,0.3587,0.2862,0.2831
,0.5451,0.1727,0.3226,0.3061,0.3803,0.5016,0.261,0.2527,0.2148,0.4221,0.1644,0.3195,0.2095,0.2958,0.709,0.7779,0.582,0.
773,0.6169,0.7242,0.6444,0.4911,0.5946,0.8857,0.6773,0.425,0.5184,0.7464,0.3263,0.4484,0.4172,0.4233,0.7141,0.6002,0.52
64,0.3805,0.3081,0.4328,0.262,0.2373,0.3755,0.6936,0.7146,0.6249,0.7371,0.5163,0.6164,0.602,0.1282,0.1235,0.896,0.9361,
0.8234,0.936,0.7725,0.8746,0.8493,0.3717,0.542)
> x13 <-
c(0.9218,0.7515,0.631,0.6789,0.7507,0.5454,0.5071,0.4026,0.6756,0.8817,0.8238,0.8004,0.7397,0.5611,0.7185,0.6397,0.309,
0.7134,0.9306,0.9576,0.8547,0.9578,0.8552,0.9175,0.8943,0.4958,0.6637,0.9168,0.7694,0.5505,0.7169,0.7465,0.546,0.5929,0
.4803,0.6178,0.8525,0.5569,0.3578,0.4085,0.6512,0.2688,0.437,0.383,0.4727,0.7514,0.4124,0.3225,0.2589,0.5454,0.1736,0.5
197,0.4025,0.4252,0.8585,0.8212,0.7415,0.7361,0.4975,0.701,0.6052,0.4571,0.7216,0.9482,0.8289,0.5767,0.7291,0.8617,0.54
95,0.7926,0.67,0.4635,0.8842,0.897,0.7338,0.889,0.7882,0.8493,0.8145,0.4241,0.4703,0.8173,0.8522,0.7109,0.8474,0.5859,0
.761,0.7901,0.2116,0.2761,0.8547,0.6219,0.4355,0.5739,0.6174,0.4377,0.2206,0.169,0.4928,0.8957,0.9307,0.8146,0.9386,0.7
712,0.8788,0.8841,0.3338,0.5143,0.8495,0.6166,0.4185,0.6213,0.5844,0.4496,0.2312,0.2207,0.4225,0.801,0.503,0.3574,0.447
2,0.5192,0.3418,0.2163,0.1762,0.4219,0.9227,0.9502,0.8174,0.9456,0.8255,0.9076,0.884,0.4982,0.7242,0.8625,0.5987,0.3915
,0.5664,0.6751,0.3652,0.3603,0.278,0.5124,0.7496,0.4203,0.3031,0.3119,0.5539,0.1924,0.2814,0.2069,0.3732,0.4377,0.3858,
0.3033,0.2644,0.1894,0.2895,0.1862,0.1728,0.2928,0.3904,0.4136,0.3506,0.4042,0.3341,0.3513,0.3022,0.172,0.2405,0.7703,0
.7915,0.5713,0.7385,0.5994,0.6519,0.5651,0.243,0.3744,0.6335,0.3926,0.2147,0.2247,0.3545,0.158,0.2702,0.2293,0.2516,0.7
998,0.5125,0.3855,0.4221,0.5839,0.2774,0.2337,0.1597,0.4962,0.6788,0.7624,0.7518,0.4863,0.6623,0.6191,0.2293,0.249,0.68
26,0.673,0.452,0.5099,0.2496,0.476,0.3856,0.1545,0.3944,0.7498,0.4841,0.3603,0.4841,0.4858,0.331,0.221,0.1668,0.414,0.7
761,0.5886,0.4295,0.5789,0.477,0.454,0.2109,0.1715,0.4321,0.8249,0.8523,0.7357,0.8627,0.6481,0.7902,0.8134,0.2433,0.333
,0.9474,0.9664,0.8529,0.9561,0.8525,0.9355,0.906,0.5468,0.7199,0.8392,0.8935,0.6197,0.8718,0.7083,0.7876,0.7567,0.4117,
0.5672,0.9435,0.7393,0.5463,0.6717,0.8278,0.5421,0.5686,0.4231,0.6595,0.5433,0.6559,0.4709,0.6305,0.3966,0.6181,0.5525,
0.3851,0.5206,0.6105,0.3534,0.1727,0.2497,0.401,0.1361,0.2397,0.2338,0.3072,0.5825,0.2716,0.1968,0.2167,0.4164,0.1316,0
.2462,0.1615,0.3365,0.9121,0.8289,0.8433,0.6797)
> x14 <-
c(0.605,0.7367,0.6074,0.471,0.7888,0.9529,0.9682,0.8729,0.9671,0.8777,0.9369,0.9205,0.5052,0.6775,0.9258,0.9473,0.791,0
.9342,0.7866,0.8946,0.8486,0.298,0.4719,0.9115,0.944,0.7882,0.9416,0.8124,0.8765,0.8478,0.2866,0.4923,0.8096,0.827,0.72
48,0.7773,0.3288,0.7332,0.7033,0.2729,0.6541,0.7795,0.5765,0.379,0.5968,0.482,0.4258,0.1717,0.1235,0.3557,0.6996,0.6556
,0.6388,0.5742,0.2677,0.5676,0.5173,0.178,0.4612,0.6592,0.6991,0.5111,0.6796,0.4939,0.5702,0.5262,0.1322,0.2063,0.5956,
0.2446,0.1783,0.1767,0.3824,0.1115,0.2116,0.1681,0.2886,0.718,0.7382,0.5095,0.6824,0.5838,0.605,0.5168,0.2508,0.3851,0.
7244,0.4383,0.2632,0.3117,0.5275,0.1878,0.3823,0.3171,0.3125,0.2605,0.4097,0.2718,0.5295,0.1736,0.3884,0.4014,0.651,0.1
163,0.4092,0.1892,0.1451,0.183,0.3073,0.1064,0.1444,0.1356,0.2639,0.4327,0.235,0.1727,0.2032,0.2873,0.1376,0.1745,0.169
2,0.2551,0.309,0.1958,0.1254,0.175,0.1942,0.1177,0.1221,0.1253,0.1772,0.2045,0.1322,0.847,0.1237,0.1348,0.781,0.775,0.8
8,0.1346,0.2178,0.1538,0.963,0.1377,0.1428,0.872,0.897,0.98,0.1512,0.2393,0.1646,0.1161,0.1601,0.1581,0.105,0.911,0.101
5,0.1615,0.2249,0.15,0.1007,0.1372,0.1473,0.925,0.913,0.962,0.1522,0.5788,0.3061,0.2472,0.273,0.4272,0.1729,0.3134,0.25
16,0.3343,0.965,0.9522,0.9532,0.9688,0.9539,0.9298,0.9054,0.8074,0.7711,0.9641,0.8532,0.6005,0.8367,0.8758,0.6344,0.619
2,0.4129,0.3685,0.991,0.9835,0.9631,0.9738,0.9053,0.9555,0.9451,0.6033,0.7728,0.9982,0.9832,0.978,0.9924,0.9807,0.9692,
0.8562,0.6629,0.9465,0.9827,0.9675,0.9577,0.9777,0.936,0.9586,0.7631,0.475,0.8335,0.9962,0.9976,0.9833,0.999,0.9775,0.9
913,0.995,0.8692,0.9504,0.9985,0.996,0.9967,0.9958,0.9822,0.9921,0.9926,0.8991,0.9838,0.9985,0.9982,0.9913,0.9989,0.993
6,0.9955,0.9949,0.9449,0.9497,0.9992,0.9975,0.9979,0.9969,0.9905,0.9962,0.9951,0.9759,0.9943,0.7925,0.3784,0.2871,0.286
4,0.5382,0.1757,0.3795,0.2206,0.4289,0.6818,0.6457,0.2341,0.602,0.4948,0.563,0.4708,0.4283,0.5167,0.9962,0.9925,0.9831,
0.9826,0.9577,0.977,0.9632,0.9334,0.9572,0.9871,0.9506,0.8905,0.9567,0.9007,0.9134,0.4121,0.2607,0.8193,0.9987,0.9991,0
.993,0.9995,0.9929,0.9972,0.9979)
> x15 <-
c(0.9298,0.9589,0.9941,0.976,0.9343,0.9869,0.9514,0.9641,0.693,0.5281,0.8696,0.9766,0.9167,0.7991,0.9464,0.7535,0.9063,
0.2884,0.2165,0.7783,0.978,0.9491,0.8437,0.9569,0.8521,0.9037,0.297,0.2143,0.7137,0.9939,0.97,0.9277,0.9796,0.9459,0.95
88,0.7066,0.4266,0.8702,0.9954,0.9647,0.9453,0.961,0.9632,0.9147,0.724,0.4841,0.9184,0.9989,0.9976,0.9894,0.9978,0.996,
0.9918,0.9923,0.9919,0.9937,0.9985,0.9974,0.9923,0.9923,0.9818,0.9903,0.9863,0.9873,0.947,0.992,0.9364,0.8041,0.8261,0.
9064,0.6913,0.8002,0.5824,0.6916,0.9952,0.988,0.9869,0.9835,0.9506,0.9728,0.9708,0.6454,0.9454,0.9911,0.9929,0.9739,0.9
96,0.9514,0.9802,0.989,0.3703,0.3177,0.9991,0.9993,0.9956,0.9996,0.9948,0.9978,0.9984,0.8695,0.8735,0.9916,0.9528,0.820
7,0.963,0.8876,0.8907,0.5699,0.4768,0.718,0.9983,0.9986,0.9943,0.999,0.9936,0.9971,0.9972,0.9587,0.9582,0.9993,0.9995,0
.9937,0.9996,0.9966,0.9986,0.9978,0.9856,0.9914,0.9989,0.9901,0.9813,0.9898,0.9896,0.9814,0.9835,0.9272,0.9827,0.5573,0
.2856,0.2443,0.1784,0.37,0.1426,0.3153,0.3356,0.2688,0.9992,0.9972,0.999,0.9965,0.9905,0.997,0.9951,0.9705,0.9979,0.999
7,0.9998,0.9974,0.9998,0.9982,0.9993,0.999,0.9854,0.9936,0.9996,0.9996,0.9946,0.9995,0.9966,0.9983,0.9972,0.9745,0.9752
,0.9996,0.9997,0.9962,0.9998,0.9978,0.9985,0.9983,0.9647,0.978,0.9984,0.9984,0.9965,0.9982,0.9667,0.996,0.9964,0.8665,0
.9871,0.9991,0.999,0.994,0.9993,0.9929,0.9966,0.997,0.8787,0.8767,0.9893,0.9152,0.6891,0.6743,0.932,0.4742,0.7886,0.671
8,0.5985,0.9948,0.9927,0.8811,0.9827,0.9682,0.9617,0.9409,0.8335,0.8934,0.9072,0.756,0.7762,0.6443,0.6478,0.5781,0.5197
,0.5525,0.7184,0.966,0.8708,0.8346,0.8684,0.8748,0.7012,0.811,0.6927,0.8258,0.9936,0.995,0.9788,0.9978,0.9895,0.9891,0.
9864,0.9805,0.9913,0.4919,0.5062,0.5003,0.7446,0.379,0.4885,0.5913,0.1665,0.2336,0.2933,0.2085,0.2271,0.1735,0.1647,0.1
495,0.1533,0.1243,0.2098,0.3086,0.2204,0.2079,0.2004,0.2155,0.1441,0.1462,0.122,0.2223,0.2757,0.1705,0.2049,0.1785,0.22
34,0.1311,0.1322,0.1015,0.2427,0.9896,0.9505,0.959,0.9017,0.9763,0.8155,0.9642,0.858,0.8637,0.9965,0.9957,0.9879,0.9962
,0.9934,0.9916,0.9887,0.9907,0.9884,0.9992)
> x16 <-
c(0.9896,0.9947,0.9484,0.9964,0.832,0.9945,0.9537,0.9918,0.9991,0.9988,0.9978,0.9991,0.9983,0.9975,0.9958,0.9955,0.9898
,0.9996,0.9965,0.9985,0.9963,0.9981,0.9899,0.9953,0.9724,0.9979,0.9991,0.9992,0.9973,0.9996,0.9961,0.9977,0.9983,0.9758
,0.9666,0.9996,0.9995,0.9995,0.999,0.9971,0.999,0.9975,0.9877,0.9966,0.9991,0.9992,0.9944,0.9993,0.9953,0.9966,0.996,0.
9557,0.9688,0.9996,0.9997,0.9979,0.9997,0.9994,0.9993,0.9985,0.9973,0.9985,0.9971,0.9869,0.9596,0.985,0.9805,0.9667,0.9
647,0.8436,0.8357,0.9992,0.9951,0.9876,0.9931,0.9963,0.9811,0.9898,0.956,0.9092,0.6206,0.3557,0.2425,0.1715,0.3789,0.10
3,0.3661,0.2162,0.4258,0.9919,0.9728,0.9681,0.9255,0.9566,0.9432,0.8905,0.9145,0.9133,0.9992,0.9987,0.9962,0.9992,0.997
8,0.9984,0.9981,0.997,0.994,0.9997,0.9997,0.9983,0.9998,0.9994,0.9994,0.9986,0.999,0.9996,0.9994,0.9965,0.9963,0.9932,0
.9964,0.9889,0.9981,0.9921,0.992,0.9986,0.9982,0.979,0.9973,0.9971,0.9956,0.9909,0.99,0.9893,0.9894,0.9897,0.776,0.9881
,0.9346,0.9637,0.9526,0.9043,0.978,0.9998,0.9987,0.9957,0.9961,0.9989,0.9881,0.9977,0.9913,0.9933,0.9982,0.9989,0.9957,
0.999,0.9955,0.9981,0.9963,0.9953,0.9944,0.9995,0.9996,0.9996,0.9983,0.999,0.998,0.9964,0.9984,0.9994,0.9994,0.9973,0.9
997,0.9964,0.9981,0.9987,0.9464,0.9516,0.9997,0.9998,0.9968,0.9998,0.9984,0.9989,0.9992,0.9934,0.9968,0.9999,0.9994,0.9
972,0.9988,0.9987,0.993,0.9957,0.983,0.9958,0.9987,0.9936,0.9932,0.9965,0.9807,0.9951,0.8509,0.382,0.9905,0.9992,0.999,
0.9942,0.9983,0.9824,0.9954,0.9954,0.8769,0.9196,0.9997,0.9998,0.9913,0.9992,0.9973,0.9976,0.996,0.9789,0.976,0.9927,0.
9671,0.7019,0.892,0.9365,0.7319,0.7672,0.7886,0.4864,0.9934,0.9665,0.9003,0.9249,0.9377,0.875,0.705,0.3592,0.6196,0.998
```

```
3,0.9992,0.9933,0.9994,0.9899,0.9971,0.9968,0.9548,0.9117,0.9961,0.9836,0.9366,0.982,0.9561,0.9624,0.4196,0.1842,0.7695
,0.9998,0.9997,0.9981,0.9999,0.9986,0.9991,0.9995,0.9928,0.993,0.9997,0.9998,0.9986,0.9998,0.9984,0.9992,0.9992,0.9813,
0.9738,0.9998,0.9986,0.9973,0.9974,0.9984,0.9932,0.9964,0.9761,0.9919,0.9995,0.9964,0.9952,0.9906,0.9927,0.9763,0.9932,
0.9727,0.9933,0.9852,0.9742,0.956,0.9506,0.8899)
> x17 <-
c(0.9585,0.9274,0.8801,0.8923,0.964,0.7739,0.8502,0.566,0.7827,0.5611,0.4756,0.6579,0.8118,0.7431,0.2889,0.3284,0.1362,
0.4871,0.1203,0.4475,0.2676,0.461,0.9998,0.9989,0.9992,0.9978,0.9984,0.9933,0.9984,0.9963,0.9983,0.9992,0.9992,0.9977,0
.9996,0.9973,0.9984,0.9979,0.9774,0.9808,0.9992,0.9995,0.9952,0.9995,0.9951,0.999,0.9986,0.9952,0.9975,0.9997,0.9984,0.
9977,0.9982,0.9971,0.9939,0.9779,0.929,0.9967,0.9989,0.9962,0.984,0.9976,0.9907,0.931,0.6446,0.9573,0.9999,0.9994,0.999
5,0.9994,0.9986,0.998,0.9984,0.9887,0.999,0.9976,0.9903,0.9924,0.9967,0.9689,0.9915,0.8285,0.4147,0.9914,0.9994,0.9993,
0.9977,0.9995,0.9989,0.999,0.9984,0.9993,0.9992,0.9996,0.9995,0.9916,0.9991,0.9978,0.9966,0.9952,0.9874,0.9925,0.9885,0
.988,0.9018,0.9863,0.9593,0.9373,0.9514,0.8686,0.924,0.9484,0.7482,0.5317,0.7082,0.6734,0.5015,0.427,0.3618,0.5642,0.99
41,0.9969,0.9836,0.9983,0.9861,0.9906,0.9891,0.9787,0.9923)
> x1 <- c(x10,x11,x12,x13,x14,x15,x16,x17)
> x2 <-
c(0.4124,0.2964,0.1715,0.5756,0.3725,0.5027,0.6653,0.2263,0.449,0.6651,0.2799,0.1369,0.586,0.5354,0.5258,0.3253,0.3321,
0.577,0.45,0.8476,0.6118,0.671,0.6838,0.5547,0.4798,0.6326,0.5308,0.5274,0.4757,0.5999,0.2267,0.6055,0.832,0.7112,0.643
8,0.501,0.5979,0.3778,0.5693,0.3039,0.1702,0.253,0.961,0.393,0.2798,0.151,0.4351,0.729,0.7921,0.8272,0.7934,0.8046,0.90
05,0.3318,0.3958,0.2236,0.7507,0.7475,0.7899,0.8431,0.6882,0.8132,0.5877,0.5826,0.7355,0.9767,0.3388,0.6775,0.9362,0.67
76,0.824,0.8322,0.7313,0.7757,0.8112,0.3352,0.9137,0.7559,0.8725,0.7189,0.8818,0.4969,0.9039,0.5688,0.5301,0.1323,0.169
5,0.5465,0.6881,0.1643,0.6369,0.1278,0.2278,0.1928,0.1749,0.1722,0.319,0.1853,0.2597,0.3823,0.4673,0.13,0.3722,0.4702,0
.2074,0.1809,0.4568,0.5435,0.2069,0.2494,0.3286,0.3522,0.3153,0.2472,0.3015,0.3093,0.1807,0.1283,0.1295,0.1793,0.1659,0
.2235,0.1955,0.1717,0.2549,0.3325,0.2374,0.3291,0.1623,0.4239,0.953,0.1402,0.1266,0.2289,0.4629,0.2466,0.359,0.2574,0.3
253,0.2071,0.1619,0.1054,0.1392,0.2068,0.1169,0.952,0.1231,0.103,0.679,0.801,0.923,0.834,0.1819,0.6138,0.5734,0.5631,0.
9123,0.9219,0.8435,0.7377,0.8268,0.8986,0.1578,0.892,0.9229,0.7821,0.8712,0.8876,0.6824,0.7781,0.8623,0.8121,0.8269,0.9
908,0.6492,0.255,0.6538,0.8567,0.6977,0.8503,0.8717,0.9532,0.1281,0.8829,0.9425,0.8533,0.908,0.642,0.8723,0.4736,0.1343
,0.3568,0.6397,0.7399,0.1415,0.1367,0.1278,0.1156,0.891,0.7082,0.9678,0.951,0.9915,0.9693,0.9834,0.9161,0.9619,0.9405,0
.977,0.1535,0.7621,0.7907,0.9517,0.9914,0.4824,0.3099,0.9927,0.7589,0.5238,0.9261,0.9258,0.996,0.9734,0.7771,0.7991,0.5
621,0.8126,0.7618,0.8996,0.9246,0.9561,0.9946,0.988,0.7559,0.5574,0.1251,0.9974,0.9551,0.488,0.9883,0.9727,0.9986,0.968
1,0.9292,0.5194,0.514,0.2363,0.2875)
> ks.test(x1, x2, alternative = "two.sided", exact=FALSE)

    Asymptotic two-sample Kolmogorov-Smirnov test

data:  x1 and x2
D = 0.33619, p-value < 2.2e-16
alternative hypothesis: two-sided

Warning message:
In ks.test.default(x1, x2, alternative = "two.sided", exact = FALSE) :
  p-value will be approximate in the presence of ties
> # Create data frames for plotting
> df_qty <- data.frame(AlphaMissenseScore = x1, Group = " Other Polar")
> df_other <- data.frame(AlphaMissenseScore = x2, Group = " QTY-code")
> df <- rbind(df_other, df_qty)
>
> # Density Plot
> ggplot(df, aes(x = AlphaMissenseScore, color = Group)) +
+   geom_density() +
+   labs(title = "Density Plot of AlphaMissense Scores",
+        x = "AlphaMissense Score",
+        y = "Density",
+        color = "Group") +
+   theme_minimal()
>
>
```