```
R version 4.3.1 (2023-06-16 ucrt) -- "Beagle Scouts"
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Platform: x86_64-w64-mingw32/x64 (64-bit)

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> rm(list = ls())
> x0 <- c(0,50,100,0,0,0,0,0,0,0,0,25,0,0,0,0,0,25,0,0,0,0,0,0,50,0,0,0,33.333,0,0,0,0,0,10,0,50,33.333,3
3.333,36.364,16.667,0,6.667,0,6.25,0,0,9.524,13.636,19.231,3.704,3.03,0,0,1.923,4.918,6.579,0.943
,0.855,0,0.806,0.8,0,0,0,0,0,19.048,0,0,53.968,79.365,0,6.299,8.661,0,9.449,0.787,0,0,92.248,0,0,4.
724,0,0,0,0,0,0,70.866,0,5.512,0,0,0,0,0,0,0,0,82.677,3.15,0,0,25.984,35.433,3.15,74.016,15.748,34.64
6,3.937,0,15.748,0,59.843,8.661,18.11,55.906,0,37.008,2.362,63.78,0,0,0,7.087,0,18.898,0,0,13.281
,0.781,4.724,7.087,0.787,19.685,2.344,0,56.25,21.094,0,0,13.636,0,10.526,0,0,12.121,21.97,6.061,2
.273,15.909,21.212,17.054,3.03,9.848,0,0.758,0,1.515,11.364,30.303,0,9.091,0,48.485,6.061,0,62.12
1,6.818,0.758,0.758,9.848,1.515,2.273,0.752,93.182,1.515,0,0.758,0,0,1.515,0,0.781,0.752,0,0.758,
2.542,9.16,1.504,9.023,3.759,11.278,6.767,6.25,12.069,4.202,7.563,8,5.405,12,7.273,11.765,8.861,1
0.317,9.231,5.303,10.294,4.348,8.633,10,1.418,3.425,0,0,2.685,10.738,0,2.013,3.356,2.685,0.671,2.
685,92.667,0,25.333,0,10.714,2,0,0,31.333,0,0,28,0,6,13.333,2,6,0.667,87.248,10.738,69.128,1.342,
90.604,58.389,39.597,1.342,0,14.094,23.49,8.054,2.013,29.53,0,43.333,6.667,0,0,0.667,0,0,2,0,0,1.
333,1.333,0.671,1.342,11.409,0,21.477,8.725,0,0,18.792,13.333,80.667,28,2.667,90.667,76.667,2.667
,0,0,22,4,98.667,0,0,0,12.667,1.333,0,8.725,19.463,1.342,3.356,55.705,0.667,0,0,13.514,0.676)
> x1 <- c(3.378,93.243,25.503,0.671,4.054,0.671,0,0.671,6.04,0,0,0,4.027,0,1.342,5.369,0.667,0,54
,0,10.667,0,22,0,0,70,21.333,1.333,51.333,0.667,0,0,0,0,1.333,0,0,0,2,14,2.703,0,0,31.544,10.067,
22.148,0,26.846,26.846,0,2,19.333,0,0,16,31.333,0,0,6,0,0,0,0,0,77.333,0,0,20.667,0,5.333,4,14.66
7,0,5.333,0,1.333,0.667,0,1.333,0.667,2,0,0.671,0,0,96,4,0,7.333,2,0,0,0,0.667,26,4.667,14.667,41
.611,0,19.333,0,0,50.667,0.667,0,3.333,70,0,0,32.215,0.671,77.181,38.255,18.792,83.221,0,60.403,0
,0,6,0,0.676,12.838,22.973,0,0,16.216,8.108,0.676,0,34.247,15.753,0,10.345,4.861,2.74,23.973,33.3
33,6.604,3.175,0.781,0,2.74,39.041,26.027,10.959,44.521,10.959,17.808,4.11,17.808,12.329,6.897,0.
69,59.31,36.552,0,81.379,12.414,17.241,10.959,1.37,0,0,0,5.556,0.694,10.417,29.167,0.694,79.167,2
1.528,0,0.699,0.694,1.399,0,0,4.895,1.399,56.643,60.839,13.287,36.364,1.399,25.694,20.139,0.69,10
.345,12.414,2.759,4.828,0,0,3.448,0.69,0,8.392,0,0.699,13.287,6.294,2.797,0,8.392,0,5.594,0,32.39
4,0,2.113,1.408,2.113,7.042,22.535,9.155,4.196,0.699,19.718,1.408,1.408,14.286,6.338,13.475,0,1.4
18,31.206,31.915,39.716,42.553,2.857,7.092,34.752,15.603,4.317,2.899,42.029,7.971,2.19,5.882,0.73
,0.73,56.204,2.92,11.679,2.19,0,0.741,2.222,1.471,0.735,5.882,0.735,0.735,2.963,2.222,36.296,0,0.
741,28.889,35.556,3.704,45.185,12.5,0,15.556,35.556,12.687,6.015,2.256,25.191,2.29,2.308,19.38,1.
562,6.299,40,20.968,2.439,7.563,0,0,0,46.847,13.393,1.852,0.943,43.269,4.95,10.753,38.372,13.095,
1.19,0,5.97,0,0,12.121,0,31.818)
> x2 <- c(22.222,0,0,0,0,0,0,0,0,0,75,0,0,0,62.5,0,14.286,21.429,0,0,0,0,50,0,0,0,50,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,100,0,80,20,0,0,0,0,0,0,0,0,33.333,0,0,0,0,40,36.364,7.692,8.696,0,0,0,
0,3.846,4.11,8.14,1.02,0,0,0,0.877,0,0,0,0,0,23.684,0,0,51.304,75.862,0.855,2.564,6.034,0,6.034,0,0
,0,93.103,0,0,4.31,1.724,0,0,0,0,75.424,0,3.39,0,0,0,0,0,0,0,0,81.452,5.785,0,0,32.5,35.833,1.667,7
3.554,12.397,28.099,4.959,0,18.182,0,58.678,9.917,14.05,58.678,0,36.885,1.639,62.295,0,0.813,1.62
6,5.691,0.813,13.008,0,0.813,16.26,0,1.626,5.691,0.813,21.138,1.626,0,44.715,25.806,0,0,20.472,0,
11.811,0,0,6.25,17.969,8.594,0.781,18.75,24.806,19.531,3.101,7.752,0,0,0,3.876,7.752,29.457,0,6.2
02,0,52.713,8.527,0,65.116,3.101,0.775,0,9.231,0.775,0.775,2.308,88.462,1.538,0,0,0.781,0,0.8,0,0
.8,0.775,0,1.55,2.479,5.512,0.758,5.344,2.29,8.8,3.252,8.475,10.619,3.636,8,8.75,13.846,0,5.085,1
.724,12.037,6.557,3.077,4.878,4,2.941,12.319,2.174,2.837,0.68,0,0.68,6.122,0.68,0.685,6.081,2.759
,1.379,3.425,91.892,0,20.27,0,15.385,0,0.676,0,29.333,0.667,0.667,26.846,0,6,18.121,1.342,4.667,0
,85.333,9.333,60.667,1.333,90.667,56.667,46.667,0,0,14.765,30.872,6.667,0,28,0,45.333,3.333,0,0,2
.667,0,0,2.667,0,0,0.667,0.667,0,4,7.333,0,25.333,5.333,0,0,11.409,8.725,81.879,25.503,2.013,91.2
75,86.577,5.369,0)
> x3 <- c(0,20.946,6.04,97.315,0,0,0,11.333,1.333,0,12,21.333,0,4,49.333,1.333,0,0,12.752,1.342,6
.711,87.838,27.517,0,4.027,1.342,0.667,0,8.054,0,0,1.342,2.013,0,4.027,5.369,0.671,0,52.667,0,10,
0,20,0,1.333,76.667,15.333,0,54.667,0,0,0.667,0,0,0.667,0,0,0,2,10,1.333,0,0,27.517,14.094,26.174
,0,27.517,28.188,0,2.013,22.148,0,0,18.792,25.503,0,0,3.356,0,0,0,0,0,78.667,0,0,18.121,0,2.013,4
.698,17.45,0,5.369,0.671,2.027,0,1.342,6.711,0.671,1.333,0.667,0,0,0,97.315,2.685,0,8.054,1.342,0
,0,0.667,1.333,28.667,5.333,11.333,40.667,0,24.667,0,0,56,0.667,0.667,6.667,60.667,0,0,32,1.333,7
```

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4,38.667,22,88.667,0,63.333,0,0,4,3.356,1.342,12.081,18.792,0,0.671,22.148,3.356,0.671,0.676,33.1
08,17.568,0,14.384,6.803,0,2.721,23.81,4.615,1.538,2.041,0,4.762,38.776,25.85,15.646,49.66,8.163,
15.646,2.041,13.605,17.007,10.811,3.401,61.905,42.177,0.68,70.748,11.565,9.655,6.849,0.685,0,0,0,
9.524,0,10.884,24.49,2.721,85.034,19.863,0,0.685,0,0,0,0,7.534,0.685,52.74,62.329,11.644,24.658,0
.685,16.438,25.342,0,11.644,8.219,1.37,4.795,0,0,5.517,0,0,6.897,0,1.389,18.75,4.861,2.083,0,6.29
4,0.699,6.294,0,27.778,0,0.694,1.389,5.556,4.861,25.175,7.692,2.797,1.399,17.483,4.196,2.797,11.9
72,7.042,19.149,0,0,25.352,25.532,37.857,29.078,3.546,6.429,34.532,16.912,6.618,2.206,44.853,9.55
9,1.471,0.735,0.735,1.471,47.407,1.493,9.701,0.746,0,3.846,2.273,0.752,0,3.03,0,0,5.303,2.273,43.
939,0,2.256,24.06,30.827,5.224,42.537,9.701,0,18.797,31.061,9.16,6.87,1.538,25.385,3.077,3.077,20
.472,0.787,1.587,38.71,19.835,4.274,8.547)
> x4 <- c(0.862,0.87,0,40.909,9.259,0,0,40.196,5.208,10.87,33.708,20.482,1.299,0,2.899,3.922,2.32
6,25,4.762,27.778,6.667,0,0,0,0,0,0,0,20,0,75,0,0,0,80,33.333,0,0,0,0,0,0,100,0,0,0,0,0,66.667,0,
0,0,0,0,0,0,0,20,0,0,0,0,0,28.571,50,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,6.667,0,0,5.882,0,
0,0,0,0,12.5,0,10,9.091,18.182,0,21.429,0,4.348,7.692,0,21.212,2.5,2.273,4.082,7.547,3.39,8.333,4
.301,0.935,0.885,0,1.77,0,0,0,0,23.009,0,0,52.212,76.106,0,3.54,7.965,0,4.386,4.348,0,0,95.652,0,
0,7.018,0,0,0,0,0,75.862,0,3.448,0,0.847,0,0.84,0,0,0,85.124,6.667,0,0,30,40,6.612,71.311,18.852,
22.131,4.918,0,14.754,0,57.377,9.836,18.852,55.738,0,41.803,3.279,62.295,0.82,0,0.82,5.738,0.82,9
.016,0.82,0,11.475,0.82,6.557,7.377,0,0,18.852,0,0.82,52.846,24.194,0,0,12.903,0,9.677,0,0,10.484
,19.355,7.258,0.806,21.774,16.935,20.833,4.839,8.871,0,0.806,0,2.419,13.71,26.613,0,8.871,0,58.06
5,12.903,0,72.581,3.226,0.8,0,7.087,0,0,0.775,86.822,0.775,0.775,3.2,3.101,0.775,2.326,0,0,0,0.79
4,0,0.787,10,0.775,10.078,2.326,9.302,9.302,1,5.882,1.961,8.197,10.638,4.688,7.407,12.593,11.029,
5.594,10.274,2.041,1.351,0.671,0,3.356,5.333,1.333,2.013,2.667,2.013,0.671,6.04,95.302,0,22,0,6.0
61,0.667,0.667,0,32.667,0,0.667,35.333,0,6.667,10.667,0.667,3.333,0,88,12,68,2.667,90,55.333,44.6
67,0,0.667)
> x5 <- c(15.333,28.667,8.667,0,28,0,36.667,5.333,0,0,2,0,0,2.667,0,0.667,0.671,2.027,0,1.351,6.0
4,0,17.45,8.725,0,0,18.919,10.811,83.784,24.324,1.351,92.568,77.703,2.685,0,0,28,8,97.333,0,0,0,1
6.667,1.333,0,14,22.667,0,6.04,55.705,0.671,0,0.671,16.107,2.013,4.027,91.275,27.333,0.667,6.667,
0.667,0.667,0,10.067,0,0,0.671,4.027,0,0.671,8.054,0,0,55.705,0,9.333,0,18.667,0,0,71.141,18.121,
0,50.336,0,0,0,0,0,0,2.027,0,0,0,1.361,12.245,2.041,0,0,37.584,11.409,27.517,0,27.517,30.201,0,0.67
1,20.805,0,0,17.333,26,0,0,6.667,0,0,0,0,0,80,0,0,13.333,0,0.667,3.333,21.333,0,14.667,0.667,0.66
7,0,0.667,3.333,0.667,1.333,0,0,0,0.671,0,95.973,4.027,0.671,6.711,2.013,0.671,0,0,0,32.215,3.356
,17.568,43.243,0.676,25.676,0,0,55.705,0,0,4,62,0.667,0,33.333,0.667,71.812,37.584,20.134,91.275,
0,67.114,0,0,4.027,0,0,11.333,23.333,0,0.667,24,3.333,0,0.671,34.228,17.45,0,11.486,3.401,0.68,2.
174,22.297,42.149,3.008,0,2.027,0.676,4.054,42.568,27.027,14.865,52.703,8.108,17.45,2.013,16.892,
13.514,11.486,0,57.432,42.568,0.676,74.324,14.189,18.919,7.432,1.361,0,0,0,11.565,0.68,13.605,30.
612,2.041,87.755,26.531,0,1.361,0,0,0.68,0,4.762,0.68,55.782,60.544,12.245,25.85,0.68,24.658,20.5
48,0.685,8.276,10.345,0,7.586,0,0.69,6.207,0,0,11.034,1.389,0.694,14.685,8.392,4.895,0,5.634,0.70
4,3.521,0,35.417,0,0.694,0,5.556,4.895,23.776,10.49,3.497,2.098,14.685,2.098,1.399,16.901,9.155,1
8.182,0,1.389,22.759,24.306,36.806,40.972,5.556,9.722,31.25,16.783,6.294,0.704,48.936,9.22,3.546,
3.546,0,0.704,51.064)
> x6 <- c(0.709,9.929,1.418,0,2.128,2.837,2.143,1.418,4.965,0.704,0.704,3.521,6.294,39.161,0,3.49
7,23.077,34.266,2.797,41.549,10,0.719,15.108,38.129,14.493,0.725,2.19,32.117,1.481,0,24.615,4.615
,3.077,36.923,23.622,4.132,4.959,0,0,0,44.444,10.435,0,0,44.444,12.5,11.111,29.167,14.13,0,0,4.61
5,0,0,21.739,0,14.286,0,0,0,0,0,0,66.667,0,0,20,0,63.636,0,0,14.286,75,0,0,5,4.545,3.226,20,96,0,
0,0,0,0,0,0,0,93.22,0,94.915,13.559,0,0,0,6.78,0,96.61,88.333,91.667,0,0,0,96.721,83.607,1.587,1.
562,1.538,1.449,0,0,5.714,0,0,1.515,95.455,0,0,13.636,3.03,1.515,1.515,0,0,1.587,23.438,1.587,11.
111,5.357,9.091,0,8.333,3.39,0,8.889,0,16.327,4.082,0,35.714,0,6,1.754,0,12.121,3.03,4.615,13.846
,12.121,0,30.508,1.562,1.562,0,3.125,3.175,1.587,1.613,14.035,8.929,0,0,6.25,0,1.818,0,7.547,14.8
94,17.021,4,1.961,7.547,8.621,5.263,3.448,0,5,7.937,14.286,6.154,2.667,1.351,1.351,4.348,5.714,8.
451,1.22,4.819,2.273,2.247,2.247,1.124,28.09,4.494,0,0,2.128,2.97,81.132,16.814,0,0.806,0.781,3.6
5,0,6.849,0,47.26,82.192,14.384,0,0,0,0,36.735,14.286,0,89.116,45.578,3.401,0,2.041,13.605,0,0,13
.605,74.15,0,0.68,0,2.041,0,0,0,15.541,1.351,22.973,12.838,8.784,0,27.027,6.04,3.356,18,9.333,47.
333,0.667,0,26,10.667,0.667,0.667,4.667,0,0,0,1.333,3.333,36,98.667,12.667,21.333,0,0.667,0,81.33
3,0,0,12,0,0,0,1.333,1.333,0.667,0,0,0,44.595,0,18.919,62.162,0,0,2.685,0.676,1.351,0,0,1.361,0,0
,0,0,0.667,26,0.667,5.333,0,86.667)
> x7 <- c(0,0,57.047,0,46.98,0,6.04,93.333,4.667,0,0,0,2,0,0,5.333,39.333,0.667,0,10,4,0,0,1.333,
3.333,0,2,84,8.667,88.667,0,13.333,61.333,0.667,80,42,3.356,3.356,20.805,70.667,20.667,82,24.667,
2,64,0.671,4.762,3.401,3.571,3.478,0,1.351,2.685,2.703,4.73,1.342,0,0,0,45.27,21.477,0,96.644,59.
184,4.054,0.671,0,2.013,0,57.718,8.725,0.671,1.342,0.671,0,48.322,0.671,6.711,0,0.667,8.667,0,27.
333,0.667,0.667,89.333,0.667,0,0,70,0,24,0,10,10,0,0,8,0,0,0.667,0,1.333,2.667,50.667,0,15.436,0,
4.082,82.313,0,0,0.676,3.378,0,0.676,68.243,19.595,0,2.721,0,48.299,0,0,2.721,75.51,2.721,1.37,0.
685,2.703,0,0,0,70.548,1.37,0,35.135,28.378,0,40.136,12.925,23.81,4.082,0,16.216,0,45.27,35.135,1
4.865,2.703,0,30.405,0,1.351,0,6.849,3.425,0.685,93.151,5.479,13.699,0.685,13.793,5.517,3.448,52.
74,0,13.014,0,2.74,0,27.211,1.361,0.685,0.69,0,36.301,28.082,0,17.808,54.795,0,1.37,94.521,0,0,34
.932,0,2.113,0,0.685,1.37,0,0,0.685,0,0,0,6.164,0,0,0.69,0,11.034,0,41.379,0,1.379,0,25.517,0,0,8
.276,20.833,0,0,1.399,27.273,1.399,0,3.497,12.587,0,0.699,7.692,0.699,76.224,18.182,9.091,11.888,
3.497,0,18.881,24.648,0.699,25.175,42.657,0,0,0,62.238,44.755,18.881,25.874,94.366,0,2.206,0.84,0
.909,0.926,0.943,0.943,1.905,0,9.278,1.075,43.023,54.217,0,0,0,3.279,0,8.772,0,1.754,3.704,0,0,7.
692,0,0,0,2.564,35.714,2.632,0,10.256,0,59.524,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,85,0,0,46.667,0,48.485
)
```

```
> x8 <- c(35.897,0,9.434,76.667,0,0,1.471,0,0,1.449,0,0,88.406,2.899,92.754,11.594,1.471,0,0,14.7
06,0,97.059,88.235,92.647,0,0,4.286,98.571,83.099,0,1.408,0,0,0,0,5.195,0,0,1.299,92.208,2.597,0,
21.333,0,1.333,0,0,4.054,5.479,16.438,6.849,8.333,2.778,5.556,5.172,9.434,2.564,8,37.736,1.961,2.
857,21.429,2.817,4.225,1.389,0,10.345,1.613,3.226,9.375,15.625,3.125,31.25,1.562,0,0,0,8.108,6.41
,9.091,8.974,5.128,1.282,6.579,1.351,2.941,0,33.333,0,12.963,1.852,7.692,1.493,6.25,3.077,6.349,7
.812,4.688,2.941,0,2.597,10.588,3.529,4.651,12.791,4.545,1.099,3.158,3.125,20,5.155,1.942,0,4.505
,6.034,75.214,19.492,0,2.857,0,4.795,0,4.762,0,47.619,85.714,12.925,0,0,0,0,31.973,14.286,0,85.71
4,51.701,1.361,0,0.68,15.646,0,0,12.245,70.748,0,0.68,0,4.138,0,0,0.69,21.379,0.69,22.069,13.793,
5.442,0.68,28.767,10.274,2.74,17.808,8.904,42.466,0.685,0,28.188,13.423,0,0,6.711,0,0,0,2.013,4.0
27,36.242,95.973,14.765,24.161,0,0.671,0,79.195,0,0,15.436,0,0,0.671,2.685,1.342,0,0,0,0,41.216,0
,15.541,62.162,0,0,4.73,0,0,0.676,0,1.351,0,0,0,0,0,27.517,0,4.667,0,90,0.667,0,57.718,0.671,45.6
38,0,5.369,87.919,3.356,0,0,0,0,0,0,7.333,45.333,0,0,8.667,4,0,0,0.667,4,0,0,84,7.333,92.667,0,10
.667,62.667,0.667,79.333,38.667,2.685,4.698,20.805,71.233,19.31,76.552,23.611,0.694,64.583,0,4.28
6,1.429,0.935,2.113,1.408,1.389,1.389,2.685,3.356,1.342,0.671,2.013,0.676,51.333,20.805,0.671,97.
333,55.333,3.356,0,0.671,2.685,0,54.362,7.432,0.671,0.671,0.671,0.676,47.297,2.041,7.432,0.676,0,
8.725,0,28.188)
> x9 <- c(0.676,2.703,87.838,0.671,0,0,67.785,0,24.161,0,8.725,10.067,0,0.671,4.698,0,0,0,0,3.356
,1.342,50.667,0,20.946,0,0.68,80.405,0,0.671,0,6.04,0,0,62.416,22.819,0,0.676,2.027,45.638,2.703,
0,3.356,77.852,2.685,2.013,1.342,7.383,0,0,0,71.141,4.027,0,40.541,35.135,0,38.776,12.245,27.211,
3.401,0,14.966,0,42.857,40.136,16.327,6.122,0,23.81,0.685,0,0,3.425,4.11,1.37,92.414,6.207,17.361
,1.389,19.014,2.817,2.817,47.887,0,14.685,0,2.759,0,26.712,4.11,0,0,0,38.889,30.556,0,18.056,50,0
,4.167,92.361,0,0,38.194,0,0.704,0.694,0,0,0,0,0,0,0,0,4.861,0.694,0,2.083,0,11.806,0,33.333,0,0.
694,0.69,32.414,0,0,7.639,16.667,0,0,0,24.823,0,0.709,4.965,14.184,0,0.709,3.546,0,76.596,14.894,
13.475,10.638,0.709,0,25.532,17.857,1.429,20.714,58.571,0,0,0.714,63.571,46.763,26.619,25.362,97.
08,0,1.471,0,1.02,2.041,0,0,0,2.174,10.87,1.19,32.911,57.692,7.143,0,0,0,0,0,6.557,3.279,3.39,0,1
.754,0,2.128,0,0,0,10.811,0,0,5,0,59.459,0,0,0,0,0,3.03,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,12.5,0,0,0,0,
46.154,7.143,0,5.882,40,9.524,0,5.882,72.917,0,0,0,0,0,0,0,0,82.09,7.463,94.03,13.433,0,0,0,4.478
,0,97.015,83.582,97.059,0,0,4.348,98.551,63.768,0,0,0,0,0,0,4.348,0,0,1.429,77.143,2.857,0,19.118
,0,0,0,0,1.429,0,7.042,11.94,9.091,1.562,8.889,1.961,23.529,0,0,0,0,33.333,8.824,7.692,6.818,0,22
.807,0,8.696,0,2.564,0,21.429,1.724)
> x10 <- c(1.695,4.615,0,1.724,5.455,3.333,2.857,4.286,1.408,11.268,6.944,2.198,4.255,5.319,6.186
,4.082,33.333,0,1.01,0.98,3.846,0.935,63.478,14.504,0,4.11,0,4,0.667,3.333,0,43.333,80,2,0,0,0,0,
29.333,14.765,0,91.946,49.664,0,0,0.667,18,0,0,7.333,68.667,0.667,0,0,2.013,0,0,0,12.162,0.671,24
.161,14.765,4.027,0,39.597,4.054,0,10.135,0,44.295,0,0,19.333,10.738,0,0,6.667,0,0,0,0,1.333,42,9
7.333,6.667,20.667,0,0,0,82,0,0,18,0,0,0,0,0.667,0.667,0,0,0,49.664,0,8.725,58.389,0,0,0.667,0,0,
0,0,2,0,0,0,0,0,35.333,0,2,0,97.333,0,0,58.389,0,37.584,0,0.671,99.333,0.667,0,0,0,0,0,0,3.333,44
.667,0,0,4.667,0.667,0,0,0.667,4.667,0,0,82,6,97.333,0,16.667,64,0.667,84.667,34,3.333,0.667,22,7
6,26,78.667,28.667,5.333,64,0.667,0.671,3.356,1.695,5.455,18.421,0,7.407,1.333,0,1.333,0,5.369,2.
013,0.671,0,0.671,0,46.667,20.667,0,98.658,49.324,8.108,0,0,0.671,0.676,51.007,5.333,0,0,0.667,0,
56,0,2,0,0,4,0,36.667,0,0,90,0,0,0,62,0,20.667,0,2,5.333,0,0,6.667,0,0,0.667,0,2.667,1.333,44,0,2
2.667,0,0,90,0,0,0,3.333,0,0,60.667,26.667,0,0,0,54.667,0,0,3.356,78.523,1.342,2.013,3.356,0.671,
0,0,33.333,0,0,76.871,2.041,0,36.054,25.85,0,44.898,6.803,27.211,2.041,0,15.646,0,43.151,36.986,2
.703,6.081,0,30.405,0,0,0,1.361,2.721,2.721,93.197,1.361,9.524,0,23.129,2.027,1.351,50.676,0,2.02
7,0,3.356)
> x11 <- c(0,35.57,0,0,0.676,0,36.913,39.597,0,10.067,50.336,0,2.013,97.315,0,0,40.94,0,0,0,0,1.3
42,0,0,0,0.671,0,0,1.342,0,0,0.671,0,8.725,0,30.405,0,0,0,31.757,0,0,4.11,15.753,0,0,2.759,21.379
,1.379,0,2.759,17.931,0,0,3.448,0,77.931,15.862,13.793,9.655,0.69,0,26.207,12.414,1.379,25.517,60
,0.69,0.69,0,62.759,43.448,22.759,25.517,100,0,0,1.739,0,13.433,15.254,0,0,1.786,0,0,0,0,0,3.922,
86,48,0,0,0,0,2.174,0,46.667,0,0,0,0,2.381,30.952,0,0,0,0,6.452,7.407,0,0,0,20,6.667,15.385,0,14.
286,0,0,0,0,0,0,0,12.5,0,0,0,0,16.667,0,0,0,0,0,0,0,0,0,9.091,0,0,18.75,6.25,0,0,0,9.091,0,0,0,0,
0,0,4.545,0,0,6.897,4.839,0,0,2.817,0,1.149,43.269,0,0.781,0.758,0,15.217,50.714,2.113,76.224,9.7
9,1.399,22.222,0,18.621,8.219,0,20.548,2.74,0,0,6.164,0.685,2.055,0,27.397,53.061,0,0,0.676,0,0,2
.027,0.671,0,5.333,4,0,0,9.333,0,0,0,2.667,0,0,56,0.667,0,0,0.667,0.667,0,69.333,0,0.667,34,46,0.
667,0,46.667,21.333,26.667,0,0,7.333,54.667,0,4.667,8,0,2.667,0,8,24,22.667,9.333,0.667,0,31.333,
8.667,8.054,0.671,0,1.342,0.671,0,4.667,76,0,0.667,53.333,94.667,0,5.333,6.667,0,0,0,3.333,10,0,4
,0.667,61.333,0,6.667,36,6.667,0,0,9.333,2,0,35.333,0,0,0,0.667,0.667,22,0,0,0.667,0.667,0.667,9.
333,32,0.667,0,0.667,0,0,0,0)
> x12 <- c(2,0,0,0.667,40.667,0,4,88.667,0,3.333,0.667,1.333,0,85.333,0,75.333,0.667,46,0,0,3.333
,31.333,0,0,16.667,86.667,0,0,18,0.667,0.667,0,0,34.667,0,0,13.333,15.333,73.333,0,2,22.667,46,57
.333,51.333,9.333,2,6.667,42,0.667,8,8,22.667,89.333,0,0.667,1.333,0,0,3.497,0,1.333,0.667,0.667,
1.333,10,22.667,0,72,56,4,28,1.333,2,0.667,22.667,51.333,14,2,34,4,2,3.333,0,37.333,0,4,0,38.667,
0,1.333,90,0,0.671,0.671,79.866,0,44.295,0,52.349,30.38,2.013,0.667,6,1.333,87.919,0.671,0.671,1.
342,10.667,20.667,0,82.667,8,3.333,70.667,24,40.667,0,44,14,0,0,44.667,2,0,0,54.667,20,0,22.667,4
9.333,2,0,0,9.459,4.698,2.013,21.477,1.351,1.408,8.108,34.459,23.649,8.108,16.216,0,14.189,38.926
,25.333,2,0,17.333,0,15.333,31.333,62.667,66,0,0.667,3.333,0,15.333,52,0.667,20.134,0,0.676,2.027
,87.162,2.041,59.864,26.531,11.565,46.259,0,93.878,0.68,37.415,21.769,0,26.531,0.676,30.405,0,21.
088,4.054,44.595,10.135,1.351,2.027,2.703,2.027,1.351,12.838,72.973,0.676,0.676,0,1.351,0,5.405,0
,12.162,0,0,0,73.649,0,6.081,45.946,0,62.838,1.351,0,0,69.595,2.027,0,0,4.054,0,0,58.108,0,0,1.36
1,16.438,0,0,2.055,44.521,0,0,17.808,74.658,10.274,0,1.37,32.877,0,0,0,3.425,0.685,0,4.795,9.028,
2.098,0.699,19.58,38.732,4.965,51.064,41.007,5.224,0,30.952,30.4,29.6,22.4,32.258,1.613,16.393,28
```

```
.448,24.324,0.935,1,6.383,0,0,0,0,0,0,29.412,7.692,4.255,3.846,28.302,0,0,2.273,0,0,0,0,1.961,91.
489,82.222,2.703,0,0,0)
> x <- c(x0,x1,x2,x3,x4,x5,x6,x7,x8,x9,x10,x11,x12)
> y0 <- c(0,0,0,0,0,0,0,0,100,0,75,0,0,0,0,0,0,0,0,0,0,0,40,0,0,11.111,0,0,0,11.111,0,0,0,0,0,0,8
.333,0,13.333,0,0,6.25,37.5,0,0,3.846,3.704,0,5.128,4.082,5.769,9.836,1.316,6.604,5.983,0.813,6.4
52,18.4,0,0,1.587,6.349,0,6.299,0,0,0,0,0,0,0,1.575,0,0,0,0,0,0,0,0,0,0,0.787,0,0,0,0.787,11.024,
0,0,0,0,0,0,0,0,0,0,0,0,0.787,0,0,0,0,0,0,0,0,0,0,0.787,0,0,0,0,0,100,0,0,6.299,16.535,0,1.562,0,
0.781,0,0,2.362,0,0,0,0,0,10.156,0,0,0,0,0,0,12.121,12.121,0,0,1.515,0,0,0.775,0,0,0,0,0,0,1.515,
0,0.758,0,0,0,0,0,0,6.061,0,0,18.182,2.273,4.511,0,0.758,0,2.273,1.562,0,6.061,2.29,1.562,0,0,0.7
58,1.695,3.817,0,3.759,3.008,2.256,6.015,3.571,2.586,5.042,1.681,1.333,4.054,2.667,0,5.882,0,6.34
9,1.538,0.758,0,1.449,2.158,2.857,7.801,0,0,0,9.396,10.067,0,0,8.725,0.671,2.685,0,0.667,20.667,4
.667,17.857,0,0,2,0,0,0.667,2,0,0,1.333,0.667,11.333,1.333,15.333,0,0,0,0,0.671,0,0,0,0,0,0,0,0,0
,0,0.667,0,2,0,0,4.667,0.667,0,0,0,0,0,0,0,0,0.671,0.671,0,0,0,0,0.667,0,0,0,0,0,0.667,1.333,0,0,
3.333,0,0,0,0,0.667,8.667,0,0,6.04,0,0,0,4,0,15.333,0,2.703)
> y1 <- c(5.405,0,3.356,2.013,0,37.584,0,0,1.342,0,0,0,0.671,97.987,0,0,0,0,0,0,0,0,4,0,0.667,0,0
.667,0,0,0,0,0.667,0.667,4,0,0.667,4.667,1.333,0,0.667,2.027,2.013,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,12.667,8,31.333,5.333,4.667,1.333,0,4.667,6,0,0,4.667,9.333,0,2,0,0,0,0,1
.333,0,0,0,18.667,0,0,0,14.667,0,1.333,0,0.667,36,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,55.333,0,0.67
6,1.351,0.676,0.676,0,1.351,0,0,0,0,6.849,0,7.586,0,8.904,5.479,2.778,0.943,1.587,2.344,2.041,0.6
85,3.425,0,0,0,0.685,0,0,0,0,1.379,0,0,0,1.379,0,0,0.69,0,0,28.276,0.69,0,13.194,1.389,0,0,42.361
,0,0.694,0.694,2.098,0.694,0,0,0,0,0,0.699,0,0,4.196,0,0,0,7.586,0,0,0,0,0.69,0,0,0,0,0,4.895,5.5
94,0,0.699,3.497,0,0,8.392,4.196,0,1.408,0.704,0.704,6.338,0,0,0,0,0,2.098,0,0,0,1.429,0,0,0,0,0,
0,0,0,0,0,0,0,0,0.725,0.725,0,18.978,2.941,5.839,4.38,0,0,0,1.46,1.471,1.481,5.926,0,0.735,3.676,
0.735,0,10.37,0.741,0,0,0.741,0,0,0.741,0,0,0,0,0,11.94,0,0,0,0,0,0,2.344,4.724,0,0,7.317,6.723,5
.882,0,0,0,2.679,37.963,0,0,12.871,9.677,0,0,10.714,0,7.463,0,2.326,0,7.143,4.545)
> y2 <- c(5.556,0,30.769,7.692,0,0,0,62.5,0,37.5,0,37.5,0,0,0,0,14.286,0,0,0,0,0,0,0,0,0,50,0,0,0
,0,0,0,0,0,0,25,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,11.111,36.364,18.182,0,0,50,0,0,0,0,0,0,9.091,0,13.
043,11.111,13.793,0,4.444,5.769,2.74,1.163,6.122,4.587,0,3.509,18.421,0,0,0,13.158,0,5.263,0,0,0,
0,0,0,0,4.31,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.847,11.017,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,2.479,0,0,0,0,0,99.187,0,0.813,2.439,21.951,0,1.626,0.813,2.439,0,0,0,0,0,0,0,0,16.129,0,0,0,0
,0,8.594,12.5,0,0,0.781,0,0,0,0,0,0,0,0.775,0,0,0.775,0,1.55,0,0,0,0,0,0,3.101,0,0,20.93,0.775,3.
846,2.308,0.769,0,10,2.344,0,1.6,1.562,0,0.775,0.769,0,1.653,3.937,0,2.29,0.763,0,7.317,6.78,1.77
,2.727,1,0,0,0.84,5.932,0,1.852,1.639,1.538,2.439,1.6,5.882,1.449,9.42,0,0,0,11.565,10.884,0.68,0
.685,6.757,2.069,4.828,0,0.676,22.297,6.757,34.615,7.692,0.676,0.676,0.671,0,2,4,0.671,0,2,0,10.0
67,0,16,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.333,0,0,4,3.333,0,0,1.333,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,0.671)
> y3 <- c(0,0,2.013,1.342,0.667,0,0,0.667,6,0,0,4.667,0,0,0,8.667,0,14,0,2.685,1.342,0,4.698,2.66
7,0,28.859,0,0,1.342,0,0,0,0.671,98.658,0,0,0,0,0,0,0,0,2.667,0,0,0,0,0,0,0,0,0,0,0.667,0,2.667,2
.667,0.667,0,2,2.667,0.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,8.054,7.383,34.8
99,5.369,4.027,1.342,0,2.703,6.04,0,0.671,7.333,6.667,0,1.333,0.671,0,0,0,0.671,0,0,0,12.667,0,0,
0,12.667,0,2,0,0,28.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,52,0,0,0.671,2.685,0.671,0,1.342,0,0,0,
0.676,5.405,0,11.644,0,2.041,8.163,2.721,2.308,1.538,0.68,2.041,0.68,1.361,0,0.68,0,0,0,0,0,0,2.0
27,0.68,0,0,0,0,0,0,0,0,34.247,0,0,10.884,0,0,0.68,42.177,0,0,0,2.055,0,0,0,0,0.685,0,0.685,0,0,4
.11,0,0.685,0,11.644,0,0,0,0,1.37,0,0,0,0,0,6.944,4.861,0,1.389,6.944,0,0,8.392,4.196,0,0.694,0,3
.472,4.861,0.694,1.389,0.699,0,0,2.098,0,0,0,2.817,0,0,0,0,0,0,0,1.418,0,0,0,0,0,2.206,0,0,17.647
,0.735,5.882,0,0.741,3.731,0,0,2.29,3.077,4.545,0,0.752,3.03,0,0,9.091,0,0,0,0,0,0,0,0,0,0,0,0,9.
16,0,0,0,0,0,0,0,7.143,0,0,6.838,1.709)
> y4 <- c(4.31,0.87,0,0,3.704,33.945,0,0,11.458,3.261,1.124,0,10.39,0,5.797,1.961,2.326,3.571,14.
286,0,6.667,0,18.182,0,0,0,0,50,0,25,0,33.333,0,0,0,0,0,0,0,0,0,0,0,0,0,66.667,0,33.333,0,0,0,0,0
,0,0,0,0,0,40,20,0,0,0,0,25,0,0,0,0,0,25,0,0,0,0,0,0,0,33.333,0,0,0,0,0,10,0,0,12.5,0,0,0,11.765,
0,0,0,0,0,0,0,0,7.692,0,5.556,0,0,0,6.061,10,4.545,4.082,1.887,15.254,2.778,8.602,8.411,0,1.77,25
.664,0,0,0.885,14.159,0,4.425,0,0,0,0,0,0,0.877,0,0,0,0,0,0,0,0,0,0,0,0.87,0,0,0,0.862,9.402,0.84
7,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.82,0,0,3.279,0,0,0,0,0,99.18,0,0.82,7.377,24.59,0,0.82,
0,1.639,0,0,3.39,3.279,0,0,0,0,0,12.903,0,0,0,0,0,11.29,16.935,0,0,0.806,0,0,0,0,0,0,0,0,0.806,0,
4.839,0,0.806,0,0,0,0,0,0,4,0,0,19.685,0,7.752,0.775,0,0,5.6,0,0,0.775,4.651,0.8,0.787,0.794,1.68
1,0.787,4.615,0,3.101,0.775,0.775,3.876,4,4.902,5.882,3.279,1.064,1.562,3.704,2.222,3.676,3.497,2
.055,10.204,0,0,0,6.711,13.333,0,0,3.333,0.671,3.356,0,0,24,4.667,20,9.091,0,1.333,0,0,2.055,6,1.
333,0.667,2.667,0,9.333,0,16.667,0,0,0,0,0,0,0,0,0)
> y5 <- c(0,0,0.667,0,0,0,0,0,0.667,0,0,2.667,1.333,0,0,0.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,2,0,0,3.333,2,0,0,0,2.667,8,0,0,4,0.671,0,0,8.725,0,12.081,0,2.685,4.698,0,4.667,2,0,37.333,0,0,
1.342,0,0,0,0,99.329,0,0,0,0,0,0,0,0,6.667,0,0.671,0.671,0,0,0,0,0,0,1.342,5.369,0,0.676,2.721,1.
361,0,1.361,2.721,1.342,0,0,0,0,0,0,0,0,0,0,0,0.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,12,6,33.333,3.3
33,1.333,0.667,0,2,8,0,0,4,4.667,0,0,0.671,0,0.671,0,0,4.027,0,0,0,10.738,0,0,0.671,6.757,0,0,0.6
76,0,37.162,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,49.664,0,0,3.333,2,2,0,2,0,0,0,0,5.369,0,5.405,0,0.
68,6.522,4.054,0,5.263,3.759,2.703,0.676,2.027,0,0,0,0,0,0.671,0,0,0,0,0,0,0,2.027,0,0,1.351,0,0,
21.918,0.68,0,10.204,0,0,0,48.98,0,0,0.68,0.68,0,0,0.68,0,0,0,1.361,0,0,2.721,0,0,0,10.959,0,0,0,
0,0.69,0,0,0,0,0.69,2.778,7.639,0.699,0,4.196,0,0,8.451,3.521,0,0.694,2.083,2.083,4.861,0.694,0,0
,0,0,2.098,0,0,0,0.704,0.704,0,0,0,0,0,0,1.389,0,0,0,0,0,1.408,0.709,0,20.567,0.709,8.451,1.408,0
)
> y6 <- c(4.255,0,0.709,2.837,1.418,2.128,0,0,2.128,0,0,6.338,0,0,0.699,0,0,0,0.699,0,0,0,0,0,6.5
```

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22,0,0,0,0,0,0,1.538,7.692,0,0,9.091,1.653,1.639,0.82,0,0,1.739,38.261,2.752,0,6.731,10.101,2.083
,0,2.273,0,6.154,0,0,0,0,0,0,20,0,0,0,0,0,0,0,0,0,0,14.286,0,0,0,0,9.091,5,22.727,12.903,0,2,22.6
42,11.111,0,0,23.729,1.695,1.695,5.085,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
3.03,1.515,1.515,3.03,1.515,1.562,3.125,3.175,0,3.175,3.704,25,3.636,0,18.333,0,1.923,2.222,2.273
,6.122,8.163,2.326,2.381,2.381,0,1.754,0,0,13.636,3.077,0,0,0,1.695,1.562,0,3.125,0,0,0,0,0,8.929
,5.263,0,12.5,5.556,7.273,5.556,1.887,0,4.255,6,0,3.774,0,5.263,6.897,0,5,0,7.937,20,0,0,2.703,2.
899,2.857,1.408,8.537,1.205,5.682,0,1.124,3.371,5.618,30.337,1.124,3.371,6.383,1.98,0,0,9.917,0.8
06,0,0,11.724,0,0,0,0,0,0,0,0,0,0,99.32,0,0,0,0,0,0,0,0,0,0,0,0,0.68,0,0,0,0,8.784,0,0,0.676,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,8,0.667,0,0,0,0,0,0,0,0,0,0,0.667,0,0,98,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
6.04,3.356,0,8.108,0,0.676,2.721,2.703,0,1.342,2,0,0.667,0,0,0.667,2)
> y7 <- c(0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,22.667,0,0,0,1.333,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,65.333,0,0,0.667,0,53.02,0,2.721,0,0.87,12.5,8.108,8.725,4.054,17.568,4.027,1.342,0,0.671,0.676
,0.671,4.698,0,0,4.73,0,0.671,1.342,0,0,0,0,0,0,0.671,0,0,0,0,0,0,0,0,0,0,0,0.667,0,0,0.667,0,0,0
,0,0.667,24.667,0.667,0,4.667,0,4,10,0,62,19.333,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.68,0,0,0,0,0.68,0,
0,2.055,5.479,0,0.68,14.483,0,0,0,0,0.676,0,0,0,0,0,1.361,0,0.676,0,0.676,0,1.351,0,0,2.027,0,4.0
54,0,0,0,16.438,0,0,0,0.685,0.69,0,0,0,0,0,0,0.685,0,0.68,0,0,0,0,0,0,0,0.685,0,0,2.055,0,0,0,2.0
55,1.37,0,0,0,0.685,0,0,0,0,0,0,0,8.966,11.724,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,6.993,0,0,12.587,0.6
99,0,0,0,1.399,5.594,0,0,0,0,0,0,0,0,0.699,0,0,0,0,0,0,0,0,0,0,0,1.471,0.84,0.909,0.926,16.038,2.
83,0,4.854,3.093,1.075,0,0,1.408,37.143,7.576,4.918,0,0,26.316,10.526,1.852,1.852,0,1.923,28,44.4
44,2.326,2.564,7.143,34.211,2.564,0,2.381,4.762,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,17.857,0,0,0)
> y8 <- c(7.692,11.765,0,0,22.222,9.231,0,1.471,25,4.348,1.449,2.899,0,1.449,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,1.408,0,0,0,0,0,0,0,0,0,0,0,2.597,0,1.333,1.333,5.333,0,6.757,1.37,1.37,6.849,4.167,12.
5,9.722,0,11.321,2.564,0,0,9.804,12.857,0,5.634,8.451,0,3.774,0,22.581,1.613,0,1.562,1.562,0,0,2.
74,1.37,1.37,0,1.282,3.896,2.564,5.128,3.846,1.316,1.351,2.941,7.692,0,15.094,3.704,1.852,3.846,2
.985,1.562,1.538,15.873,10.938,1.562,1.471,2.597,3.896,3.529,3.529,5.814,2.326,5.682,5.495,2.105,
3.125,5.263,22.68,1.942,3.704,6.306,3.448,0,2.542,8.148,4.286,0.694,2.74,14.286,0,0,0,0,0,0,0,0.6
8,0,0,0,97.959,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,8.966,0,0,0,0,0.68,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,6
.04,0,0,0,0.671,0,0,0,0,0.671,0,0,95.302,0.671,0,0,0,0,0,0,0,0.676,0,0,0,0,0,0,0,6.757,1.351,0,3.
378,0,0,2.027,0.676,0,0.671,4.698,0.671,0.671,0,0,0,0.667,0,0,0,0,0,0,0,0.671,0,0,0,0,0,0,0,0,0,0
,24,0,0,0,0,3.333,0,0,0,0,0,0,0,0,0,0,0,0,0,64.138,0,0,0,0,55.245,0,1.429,0.935,2.817,19.71
8,7.639,8.333,2.013,22.819,6.711,0.671,0,0,0,0,2.685,0,0,1.342,0,0,0,0,0,0,0.671,0.671,0,0,0,0,0,
0,0,0,0,0)
> y9 <- c(0,0,0,0.671,0.671,0,0.671,0,0,0,0,0.671,20.134,0.671,0,3.333,0,2.013,7.383,0,63.758,16,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.342,0,0,2.685,2.685,0,0,11.486,0,0,0.671,0,0.676,0,0,0,0,
0,2.041,0,0.68,0,0.68,0,0,0,0,1.361,0,2.74,0,0,2.055,15.753,0,0,0,0,0.704,0,0,0,0,0,0.694,0.69,0,
0.685,0,0,0,0,0,0.694,0,1.389,0,0,0.694,0,0,0,1.389,1.408,0,0.694,0,0,0,0,0,0,0,0,0,5.556,9.028,0
,0,0,0,0,0,0.694,0,0,0,0,0,0,0,0,9.929,0,0,11.348,0,0,0,0,2.128,11.348,0,0,0.709,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,1.471,1.471,1.01,0,1.02,6.316,0,0,2.174,5.435,2.381,1.266,0,0,2.778,32.857,4.412,
1.587,1.613,0,16.393,0,5.085,1.754,1.786,0,70.213,10.638,4.545,2.703,31.707,2.439,0,5,2.703,0,0,0
,0,0,0,0,0,0,0,0,0,0,0,0,0,0,37.5,0,0,0,0,0,0,18.182,7.692,0,0,0,0,0,0,0,0,32.075,5.357,0,0,22.22
2,31.25,1.515,1.515,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.429,0,0,0,5.714,0,11.594,
1.449,1.449,5.714,4.286,2.817,5.634,10.448,1.515,9.375,0,1.961,9.804,0,0,0,12.5,0,5.882,5.128,2.2
73,2.222,3.509,0,4.348,0,0,0,10.714,0)
> y10 <- c(5.085,0,1.449,0,1.818,0,0,4.286,0,1.408,6.944,3.297,5.319,1.064,3.093,2.041,3.125,23.2
32,3.03,0.98,3.846,2.804,0.87,1.527,6.207,9.589,1.333,1.333,10.667,0,0,0,0,0,0,0,0,0,0,0,99.329,0
,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,12.162,0,0,0,0,0.671,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,4,0.667,0,0,0,0
,0,0,0,0,0,0,100,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2.667,0,0,6,0.667,0.667,2.667,0,0,1.333,2,0.667,
0.667,0,0,0,0.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,27.333,0,0,0,0.667,0.667,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,62,0,0,0,0,54.667,0,1.342,0.847,3.636,7.895,7.692,5.556,1.333,14.667,2.667,6.711,1.
342,24.161,3.356,0,0,0,0,0,2.667,0,0.676,2.703,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.333,
0,1.333,0,0,0,0,1.333,21.333,0,0,4.667,0,2,6,0,58,18,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.342,
0,0,2.013,4.698,0,0,11.486,0,84.211,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,2.041,0,0,1.361,12.
925,0,0,0,0,0,0,0,0,0,0,0,0)
> y11 <- c(0,0.671,0,0,0,0,0,0,0,1.342,0,0,1.342,0,0,0,0.671,0,0,0,0,0,0,0,0,0,0,0,0,0,2.013,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,8.966,0,0,12.414,0,0,0,0,1.379,13.793,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0.69,0.699,0,0,16.418,0,3.448,3.448,0,7.273,1.961,0,0,1.961,0,0,0,16.327,0,0,0,15.217,0,8.88
9,0,37.778,0,0,0,4.762,34.884,7.143,36.842,11.111,0,0,0,4.545,0,0,6.667,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,0,0,20,20,0,0,0,0,0,0,0,0,0,0,0,0,13.636,0,7.143,0,0,0,9.756,0,6.383,0,0,0,3.125,3.077,1
.408,9.589,5.747,0,0.826,0.781,15.909,87.681,0,0,0,0,0,0,0,0,0,0,0,0.685,0,0,0,0,0,0,0,0,21.088,0
,0,0,0,0,17.568,0,0,4,4,0,0.667,0,0,23.333,0,5.333,0,0,0.667,0,0,0,0,0,2,0,0,3.333,0,0,0,0,0,0,0,
0,12,0,0,0,32,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.671,0,0,0,0,0,0,0,13.333,0,2.74,0,0,1.333,0.667
,0,0,0,0,0,0,0,0,0,0.667,0,0,0.667,0,0,0,0,0,0,0,0.667,0,0,0,0,0,0,0,0,0.667,0,0,0,1.333,0.667)
> y12 <- c(0,0,1.333,0,0,0,0,0,0.667,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,54.667,0,0,0,0,4.667,0.6
67,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,3.333,6.667,3.333,1.333,0.699,4.762,2.667,3.333,3.33
3,0.667,0.667,0,6.667,0,0,0.667,1.333,0,0.667,0,0,0,0,0,0,0,0,0,0,1.333,0,0,0,0,0,0,0,16.107,0,0,
0,4.698,0.671,0,0,0,2.685,28.667,0,3.333,0,0.671,0,0.671,11.333,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.6
67,0,0,0,0,0,0,0,0,2.667,0,0,1.342,1.342,0.676,0,0.676,0,0,0,0,0,0,0,0,0.667,0,0,0,0,0.667,0,0,0,
0,0.667,0,0,0.667,2.667,0,5.405,1.351,35.135,0.676,0,0,0.68,0,0,0,1.361,0,0,0,0,0,0.676,0,0,0,16.
216,0.676,0,0,0,0,14.865,0,0,0,4.73,0.676,0,0.676,4.054,10.135,0,0,1.351,0.676,0,0,2.703,0,2.027,
0,0,0,0,0,0,0,3.378,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,23.973,5.479,0,1.37,0,6.849,0.685,0,0,0.6
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85,0,47.552,0,0,0.704,0.709,0,0,1.493,0,0,0,0.8,0,0.806,0.806,0,0,0.901,4.673,2,4.255,17.391,11.6
28,14.634,5.195,4.615,11.538,3.922,38.462,2.128,1.923,3.774,12.281,1.852,0,10.909,0,12.5,5.556,1.
961,2.128,0,2.703,0,0,0)
> y <- c(y0,y1,y2,y3,y4,y5,y6,y7,y8,y9,y10,y11,y12)
> cor.test(x, y,alternative = "two.sided", method = "spearman", exact=FALSE )

        Spearman's rank correlation rho

data:  x and y
S = 1.0568e+10, p-value = 3.908e-06
alternative hypothesis: true rho is not equal to 0
sample estimates:
        rho
-0.07389848

> # ---- Confidence interval ----
> if(!"RVAideMemoire" %in% installed.packages()){install.packages("RVAideMemoire")}
Installing package into 'C:/Users/alper/AppData/Local/R/win-library/4.3'
(as 'lib' is unspecified)
--- Please select a CRAN mirror for use in this session ---
Warning: dependency 'mixOmics' is not available
also installing the dependencies 'rappdirs', 'cachem', 'memoise', 'mime', 'sass', 'highr', 'xfun'
, 'bslib', 'fontawesome', 'tinytex', 'base64enc', 'fastmap', 'yaml', 'knitr', 'rmarkdown', 'later
', 'lazyeval', 'htmltools', 'htmlwidgets', 'httpuv', 'crosstalk', 'jquerylib', 'promises', 'estim
ability', 'pixmap', 'sp', 'RcppArmadillo', 'DT', 'ellipse', 'emmeans', 'flashClust', 'leaps', 'mu
ltcompView', 'scatterplot3d', 'ggrepel', 'permute', 'ade4', 'FactoMineR', 'pls', 'pspearman', 've
gan'

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/rappdirs_0.3.3.zip'
Content type 'application/zip' length 51425 bytes (50 KB)
downloaded 50 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/cachem_1.0.8.zip'
Content type 'application/zip' length 72581 bytes (70 KB)
downloaded 70 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/memoise_2.0.1.zip'
Content type 'application/zip' length 50182 bytes (49 KB)
downloaded 49 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/mime_0.12.zip'
Content type 'application/zip' length 40809 bytes (39 KB)
downloaded 39 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/sass_0.4.7.zip'
Content type 'application/zip' length 2595756 bytes (2.5 MB)
downloaded 2.5 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/highr_0.10.zip'
Content type 'application/zip' length 46567 bytes (45 KB)
downloaded 45 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/xfun_0.40.zip'
Content type 'application/zip' length 435521 bytes (425 KB)
downloaded 425 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/bslib_0.5.1.zip'
Content type 'application/zip' length 6164271 bytes (5.9 MB)
downloaded 5.9 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/fontawesome_0.5.2.zip'
Content type 'application/zip' length 1358193 bytes (1.3 MB)
downloaded 1.3 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/tinytex_0.48.zip'
Content type 'application/zip' length 137120 bytes (133 KB)
downloaded 133 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/base64enc_0.1-3.zip'
Content type 'application/zip' length 32637 bytes (31 KB)
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downloaded 31 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/fastmap_1.1.1.zip'
Content type 'application/zip' length 129540 bytes (126 KB)
downloaded 126 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/yaml_2.3.7.zip'
Content type 'application/zip' length 115669 bytes (112 KB)
downloaded 112 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/knitr_1.44.zip'
Content type 'application/zip' length 1515450 bytes (1.4 MB)
downloaded 1.4 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/rmarkdown_2.25.zip'
Content type 'application/zip' length 2676565 bytes (2.6 MB)
downloaded 2.6 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/later_1.3.1.zip'
Content type 'application/zip' length 463823 bytes (452 KB)
downloaded 452 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/lazyeval_0.2.2.zip'
Content type 'application/zip' length 161472 bytes (157 KB)
downloaded 157 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/htmltools_0.5.6.1.zip'
Content type 'application/zip' length 355061 bytes (346 KB)
downloaded 346 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/htmlwidgets_1.6.2.zip'
Content type 'application/zip' length 811006 bytes (791 KB)
downloaded 791 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/httpuv_1.6.11.zip'
Content type 'application/zip' length 999446 bytes (976 KB)
downloaded 976 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/crosstalk_1.2.0.zip'
Content type 'application/zip' length 410322 bytes (400 KB)
downloaded 400 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/jquerylib_0.1.4.zip'
Content type 'application/zip' length 526004 bytes (513 KB)
downloaded 513 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/promises_1.2.1.zip'
Content type 'application/zip' length 2013678 bytes (1.9 MB)
downloaded 1.9 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/estimability_1.4.1.zip'
Content type 'application/zip' length 43227 bytes (42 KB)
downloaded 42 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/pixmap_0.4-12.zip'
Content type 'application/zip' length 209192 bytes (204 KB)
downloaded 204 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/sp_2.1-0.zip'
Content type 'application/zip' length 2081481 bytes (2.0 MB)
downloaded 2.0 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/RcppArmadillo_0.12.6.4.0.zip'
Content type 'application/zip' length 2042067 bytes (1.9 MB)
downloaded 1.9 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/DT_0.30.zip'
Content type 'application/zip' length 1814546 bytes (1.7 MB)
downloaded 1.7 MB
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trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/ellipse_0.5.0.zip'
Content type 'application/zip' length 219358 bytes (214 KB)
downloaded 214 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/emmeans_1.8.8.zip'
Content type 'application/zip' length 2185083 bytes (2.1 MB)
downloaded 2.1 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/flashClust_1.01-2.zip'
Content type 'application/zip' length 28014 bytes (27 KB)
downloaded 27 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/leaps_3.1.zip'
Content type 'application/zip' length 87008 bytes (84 KB)
downloaded 84 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/multcompView_0.1-9.zip'
Content type 'application/zip' length 116735 bytes (113 KB)
downloaded 113 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/scatterplot3d_0.3-44.zip'
Content type 'application/zip' length 352418 bytes (344 KB)
downloaded 344 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/ggrepel_0.9.4.zip'
Content type 'application/zip' length 605461 bytes (591 KB)
downloaded 591 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/permute_0.9-7.zip'
Content type 'application/zip' length 226035 bytes (220 KB)
downloaded 220 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/ade4_1.7-22.zip'
Content type 'application/zip' length 5746493 bytes (5.5 MB)
downloaded 5.5 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/FactoMineR_2.9.zip'
Content type 'application/zip' length 3800862 bytes (3.6 MB)
downloaded 3.6 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/pls_2.8-2.zip'
Content type 'application/zip' length 1178950 bytes (1.1 MB)
downloaded 1.1 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/pspearman_0.3-1.zip'
Content type 'application/zip' length 61797 bytes (60 KB)
downloaded 60 KB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/vegan_2.6-4.zip'
Content type 'application/zip' length 3270319 bytes (3.1 MB)
downloaded 3.1 MB

trying URL 'https://cloud.r-project.org/bin/windows/contrib/4.3/RVAideMemoire_0.9-83-3.zip'
Content type 'application/zip' length 1110263 bytes (1.1 MB)
downloaded 1.1 MB

package ‘rappdirs’ successfully unpacked and MD5 sums checked
package ‘cachem’ successfully unpacked and MD5 sums checked
package ‘memoise’ successfully unpacked and MD5 sums checked
package ‘mime’ successfully unpacked and MD5 sums checked
package ‘sass’ successfully unpacked and MD5 sums checked
package ‘highr’ successfully unpacked and MD5 sums checked
package ‘xfun’ successfully unpacked and MD5 sums checked
package ‘bslib’ successfully unpacked and MD5 sums checked
package ‘fontawesome’ successfully unpacked and MD5 sums checked
package ‘tinytex’ successfully unpacked and MD5 sums checked
package ‘base64enc’ successfully unpacked and MD5 sums checked
package ‘fastmap’ successfully unpacked and MD5 sums checked
package ‘yaml’ successfully unpacked and MD5 sums checked
package ‘knitr’ successfully unpacked and MD5 sums checked
```

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package ‘rmarkdown’ successfully unpacked and MD5 sums checked
package ‘later’ successfully unpacked and MD5 sums checked
package ‘lazyeval’ successfully unpacked and MD5 sums checked
package ‘htmltools’ successfully unpacked and MD5 sums checked
package ‘htmlwidgets’ successfully unpacked and MD5 sums checked
package ‘httpuv’ successfully unpacked and MD5 sums checked
package ‘crosstalk’ successfully unpacked and MD5 sums checked
package ‘jquerylib’ successfully unpacked and MD5 sums checked
package ‘promises’ successfully unpacked and MD5 sums checked
package ‘estimability’ successfully unpacked and MD5 sums checked
package ‘pixmap’ successfully unpacked and MD5 sums checked
package ‘sp’ successfully unpacked and MD5 sums checked
package ‘RcppArmadillo’ successfully unpacked and MD5 sums checked
package ‘DT’ successfully unpacked and MD5 sums checked
package ‘ellipse’ successfully unpacked and MD5 sums checked
package ‘emmeans’ successfully unpacked and MD5 sums checked
package ‘flashClust’ successfully unpacked and MD5 sums checked
package ‘leaps’ successfully unpacked and MD5 sums checked
package ‘multcompView’ successfully unpacked and MD5 sums checked
package ‘scatterplot3d’ successfully unpacked and MD5 sums checked
package ‘ggrepel’ successfully unpacked and MD5 sums checked
package ‘permute’ successfully unpacked and MD5 sums checked
package ‘ade4’ successfully unpacked and MD5 sums checked
package ‘FactoMineR’ successfully unpacked and MD5 sums checked
package ‘pls’ successfully unpacked and MD5 sums checked
package ‘pspearman’ successfully unpacked and MD5 sums checked
package ‘vegan’ successfully unpacked and MD5 sums checked
package ‘RVAideMemoire’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in
        C:\Users\alper\AppData\Local\Temp\RtmpMvxhRW\downloaded_packages
> library(RVAideMemoire)
*** Package RVAideMemoire v 0.9-83-3 ***
> spearman.ci(x,y)

        Spearman's rank correlation

data:  x and y
1000 replicates

95 percent confidence interval:
 -0.1052458 -0.0456365
sample estimates:
        rho
-0.07389848

>
```