

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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Natural language support but running in an English locale

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Type 'demo()' for some demos, 'help()' for on-line help, or
 'help.start()' for an HTML browser interface to help.
 Type 'q()' to quit R.

[Previously saved workspace restored]

```
> rm(list = ls())
> x0 <- c(59,72,62,79,82,29,24,25,14,39,41,4,39,56,5,20,58,39,0,31,57,23,0,54,57,28,28,78,71,89,2
6,49,72,67,50,14,46,61,17,21,50,22,1,31,35,2,21,56,26,5,51,68,3,6,30,32,0,8,27,0,0,0,2,5,1,12,7,2
4,17,76,44,73,40,11,53,47,4,10,65,34,2,54,55,10,8,48,52,1,2,46,28,0,0,52,18,0,7,54,18,0,40,72,45,
52,3,0,79,81,22,58,25,59,20,8,49,42,8,13,42,40,9,39,76,25,86,49,33,66,39,1,44,60,50,19,30,44,21,7
6,80,82,39,36,82,26,25,4,12,11,0,7,3,19,43,1,21,53,28,0,49,55,4,32,43,37,78,84,75,2,52,64,32,43,5
5,65,15,42,58,28,1,40,47,4,10,68,52,1,25,66,17,10,61,31,5,15,44,0,2,28,29,7,18,0,3,38,8,15,60,21,
60,56,41,76,78,20,51,61,18,11,37,52,0,7,57,4,0,20,49,0,1,40,37,0,9,44,55,20,0,3,50,14,5,46,59,39,
6,68,46,57,9,57,67,9,12,48,15,1,37,5,1,10,14,4,0,37,13,6,7,6,10,17,1,1,5,2,6,2,0,13,2,0,18,68,49,
27,55,5,39,44,51,6,0,9,12,0,3,2,11,0,6,5)
> x1 <- c(29,0,8,0,0,0,0,0,0,0,4,1,3,1,17,4,39,76,38,93,24,56,73,50,18,28,41,34,1,17,64,18,0,8,
37,2,0,42,8,2,16,7,30,55,55,12,7,16,55,5,1,5,12,0,0,36,42,10,73,6,39,18,40,3,2,5,4,1,30,24,1,1,26
,41,1,10,13,17,2,5,17,3,4,6,7,1,4,1,0,0,0,6,2,1,13,37,45)
> x <- c(x0,x1)
> y0 <- c(0.965,0.753,0.06375,0.6605,0.99925,0.92,0.213,0.98375,0.4155,0.01075,0.035,0.90375,0.21
85,0.00175,0.00075,0.24675,0.01625,0.00525,0.011,0.2355,0.0735,0.03625,0.01225,0.77425,0.7395,0.3
69,0.98975,0.99975,0.99825,0.99975,0.997,0.99925,0.9995,0.9445,0.96925,0.35925,0.99725,0.508,0.22
75,0.69525,0.3815,0,0.19125,0.95675,0.016,0.464,0.77375,0.99775,0.2385,0.76225,0.8525,0.96825,0.4
3625,0.02625,0.7445,0.99175,0.0095,0.00025,0.98225,0.90325,0.84925,0.00025,0.718,0.988,0.9425,0.0
595,0.2,0.9715,0.344,0.94225,0.99975,0.99975,0.365,0.99975,0.9995,0.9995,0.9945,0.3015,0.60025,0.
94375,0.00275,0.0795,0.09,0.3375,0.95925,0.389,0.0195,0.99125,0.8685,0.0275,0.0145,0.0155,0.01725
,0.01575,0.03525,0.0475,0.00475,0.057,0.04975,0.01075,0.918,0.90675,0.878,0.99775,0.866,0.963,0.9
9975,0.99975,0.99975,0.99675,0.434,0.349,0.70225,0.505,0.15325,0.1025,0.74825,0.84225,0.02125,0.6
11,0.9705,0.341,0.123,0.18975,0.9965,0.91575,0.99975,0.91675,0.9785,0.007,0.9475,0.99625,0.9995,0.
9575,0.9775,0.99975,0.976,0.7895,0.99975,0.997,0.99975,0.99975,0.99975,0.99125,0.88025,0.2075,0.
00325,0.44725,0.0705,0.92375,0.01025,0.03275,0.92525,0.9535,0.01775,0.06775,0.98675,0.00025,0.641
5,0.21725,0.031,0.33225,0.99525,0.99,0.99975,0.99975,0.99975,0.318,0.99975,0.89225,0.0625,0.9945,
0.99975,0.99475,0.5935,0.99975,0.8285,0.80875,0.99375,0.99975,0.07475,0.04425,0.99875,0.9995,0.16
25,0.69925,0.9845,0.803,0.28325,0.989,0.9145,0.11175,0.7945,0.01025,0.00175,0.19425,0.773,0.01225
,0.0285,0.25825,0.37625,0.0095,0.23725,0.99725,0.46275,0.416,0.9995,0.99975,0.99975,0.99975,0.896
5,0.93725,0.997,0.916,0.198,0.8295,0.7755,0.24425,0.0815,0.68975,0.03325,0.008,0.0175,0.05475,0.0
3825,0.00125,0.02125,0.05625,0.00775,0.0005,0.01825,0.9995,0.8415,0.00125,0.00575,0.937,0.98125,0.
00325,0.00425,0.489,0.27625,0.31475,0.15925,0.54575,0.93075,0.9995,0.9985,0.99875,0.11825,0.9047
5,0.9985,0.38725,0.01025,0.82125,0.49325,0.00025,0.42475,0.99525,0.03925,0.00175,0.483,0.512,0.00
5,0.044,0.153,0.52175,0.6185,0.99575,0.99975,0.9995,0.89125,0.25025,0.95275,0.953,0.9215,0.18425,
0.9845,0.99875,0.9,0.05925,0.99675,0.99975,0.9995,0.9995,0.99975,0.929,0.999,0.99975,0.99975,0.85
975,0.57525,0.9995,0.99975,0.00525,0.83975,0.9995,0.458,0.20825,0.9985,0.9995)
> y1 <- c(0.657,0.98525,0.99925,0.01475,0.02975,0.19325,0.707,0,0.0375,0.0575,0.3125,0.57525,0.00
725,0.26325,0.55825,0.9915,0.964,0.99975,0.99975,0.99975,0.99975,0.992,0.9995,0.86825,0.22925,0.9
9075,0.409,0.04475,0.98825,0.70475,0.01675,0.378,0.89775,0.00025,0.123,0.02,0,0.93525,0.901,0.710
75,0.9845,0.9925,0.99975,0.99975,0.99975,0.97775,0.999,0.93275,0.97175,0.71125,0.94,0.20525,0.520
5,0.019,0.0035,0.05325,0.996,0.863,0.994,0.99575,0.99325,0.99975,0.99,0.99725,0.9665,0.091,0.478,
0.45975,0.1705,0.71925,0.40925,0.17175,0.437,0.36675,0.027,0.0025,0.94525,0.162,0.0015,0.977,0.96
95,0.0015,0.95825,0.999,0.2085,0.81225,0.9995,0.7835,0.14725,0.955,0.2685,0.00675,0.36975,0.1325,
0.08825,0.975,0.99975,0.9915)
> y <- c(y0,y1)
> cor.test(x, y,alternative = "two.sided", method = "spearman", exact=FALSE )
```

Spearman's rank correlation rho

```
data:  x and y
S = 6858719, p-value = 1.012e-12
alternative hypothesis: true rho is not equal to 0
sample estimates:
      rho
0.3472486

> # ---- Confidence interval ----
> if(!"RVAideMemoire" %in% installed.packages()){install.packages("RVAideMemoire")}
> 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:
 0.2550963 0.4312217
sample estimates:
      rho
0.3472486
```

```
>
```