R version 4.3.1 (2023-06-16 ucrt) -- "Beagle Scouts"

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Platform: x86 64-w64-mingw32/x64 (64-bit) R is free software and comes with ABSOLUTELY NO WARRANTY. You are welcome to redistribute it under certain conditions. Type 'license()' or 'licence()' for distribution details. Natural language support but running in an English locale R is a collaborative project with many contributors. Type 'contributors()' for more information and 'citation()' on how to cite R or R packages in publications. 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(69,66,93,85,29,68,22,27,34,15,1,46,43,4,17,61,52,0,39,44,33,0,35,56,19,33,86,85,34,92,2</p> 7,47,80,56,45,33,58,64,23,26,49,19,6,29,26,0,19,58,29,0,56,73,5,6,18,30,2,1,31,0,0,0,2,2,1,3,12,5 0,12,70,64,78,44,8,53,62,5,14,64,35,4,60,48,9,6,58,53,6,2,31,45,0,0,49,20,0,4,55,21,0,43,70,45,56 ,0,1,63,75,19,69,22,88,58,9,63,54,27,87,80,32,31,71,29,25,19,62,8,7,53,39,8,22,52,42,9,39,75,30,8 0,50,32,68,21,1,41,60,27,13,25,44,9,48,39,44,76,92,57,70,61,32,48,48,39,20,80,26,22,6,2,12,1,6,3, 20,46,4,21,56,30,0,50,52,3,44,76,47,57,84,73,1,49,70,29,12,52,66,16,25,52,25,3,42,48,10,16,66,46, 3,43,66,8,7,75,22,1,17,52,0,3,25,30,12,12,1,15,40,13,6,61,13,82,45,47,43,22,11,79,48,0,25,39,0,8, 40,1,2,25,41,0,2,43,41,1,5,58,55,18,3,3,59,29,5,48,62,43,5,66,54,59,7,57,80,11,17,70,15,1,17,6,0, 11, 19, 3, 0, 25, 7, 5, 8, 6, 8, 6, 3, 0, 4, 0, 2, 5, 0, 25, 1) 0,15,6,33,79,45,90,25,45,73,57,32,31,53,33,0,9,53,19,0,3,46,5,1,50,5,4,17,5,28,52,53,14,6,11,35,6 ,0,2,7,0,0,41,46,10,74,9,28,20,52,1,0,4,2,0,27,26,1,2,28,30,1,9,12,34,1,4,24,1,4,4,11,1,7,4,1,0,1,5,2,1,18,49,45,32,69) > x < -c(x0, x1)> y0 <- c(0.98625,0.9025,0.89875,0.735,0.95625,0.85375,0.705,0.8425,0.42875,0.415,0.255,0.11375,0</p> .01125, 0.005, 0.0075, 0.02875, 0.0975, 0.04125, 0.25125, 0.5175, 0.59875, 0.05625, 0.73, 0.88125, 0.77, 0.42125, 0.05625, 0.0525,0.73625,0.8725,0.61375,0.16,0.13875,0.015,0.00125,0.035,0.62,0.215,0.12875,0.60875,0.88,0.1375 0.185, 0.07, 0.87, 0.6775, 0.02125, 0.54375, 0.88125, 0.90875, 0.03875, 0.23375, 0.725, 0.865, 0.06, 0.03875, 0.02125, 0.038755, 0.03875, 0.03875, 0.03875, 0.038755, 0.03875, 0.038755, 0.03875, 0.03875, 0.03875, 0.03875, 0.03875, 0.03875, 0.03875, 0.038.405, 0.66375, 0.03125, 0.10125, 0.22375, 0.1675, 0, 0.00125, 0.10875, 0.0275, 0, 0.015, 0.02125, 0, 0.06625, 0.00125,44375,0.13,0.0375,0.78125,0.98375,0.90875,0.87125,0.5525,0.1175,0.3375,0.4,0.16125,0.00625,0,0,0. 00375,0.0075,0.00375,0.00125,0.02,0,0,0,0,0.0525,0.0525,0.8425,0.84125,0.06625,0.53625,0.905,0. 29125, 0.06125, 0.3775, 0.105, 0.02, 0.02625, 0.03375, 0.00125, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0.00125, 0.00625, 0 .02125,0.0175,0,0.00375,0.00125,0.0375,0.0275,0.00625,0.005,0,0,0,0,0,0,0,0,0,0,0.00875,0,0,0.003 0,0,0,0,0.0025,0.00625,0,0.00125,0.325,0.19375,0,0.58,0.62625,0.0075,0.4375,0.935,0.35125,0.26875,0.35875,0.05375,0,0.04875,0.105,0.4625,0.22375,0.33625,0.14375,0.19125,0.57125,0.64,0.12625,0.33 875,0.61125,0.32625,0.6125,0.95,0.1175,0.15,0.7775,0.935,0.395,0.18125,0.72125,0.895,0.13375,0.34 , 0.49375, 0.2325, 0, 0.1075, 0.185, 0.00375, 0, 0.00375, 0.015, 0.08125, 0.01375, 0.025, 0.0275, 0.125, 0.14375,0.17,0.23875,0.37625,0.1975,0.94625,0.91,0.8025,0.19125,0.49375,0.87125,0.81125,0.52,0.7925,0.96 625,0.03125,0.00625,0.9225,0.68625,0.29875,0.69375,0.6375,0.01,0.0125,0.14,0.08875,0,0.08375,0.25 75,0.15875,0.00625,0,0,0,0,0.00125,0,0,0.08375,0.00125,0,0.06375,0.3925) > y1 <- c(0,0,0.08,0.54125,0.03875,0,0,0,0,0,0,0,0,0.15375,0,0,0.00125,0,0,0.00125,0.00875,0.00 625,0,0.0175,0,0,0,0,0.01125,0,0,0.0025,0,0.03875,0.08,0,0.02375,0.245,0.0225,0,0.01375,0.13625 ,0.5025,0.6925,0.88375,0.96375,0.9475,0.695,0.30625,0.70125,0.96875,0.0025,0.01125,0.67875,0.9362 5,0.01,0.02375,0.91,0.71875,0.0075,0.30625,0.34375,0.21875,0.015,0.01875,0.0825,0.005,0.00875,0.0 8125,0.0025,0,0.2025,0.52625,0,0.005,0.69875,0.06625,0,0.28625,0.67625,0.2025,0.0125,0.00125,0,0, 0,0,0,0,0.01125,0.0275,0.02625,0.40125,0.47125,0.215,0.6,0.63,0.04875,0.00375,0.34375,0.12,0.0025,0,0.00125,0.0075,0.00125,0,0.0075,0.085,0.00875,0,0.1325,0.14375,0.00125,0.00125,0.29125,0.12875 ,0,0.20625,0.4525,0.125,0.01125) > 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 = 8744591, p-value = 5.275e-11 alternative hypothesis: true rho is not equal to 0

```
R Console
sample estimates:
     rho
0.3116718
> # ---- 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.\overline{2198774} 0.4015121
sample estimates:
     rho
```

0.3116718

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