

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 'q()' to quit R.

[Previously saved workspace restored]

```
> rm(list = ls())
> x0 <- c(2,4,4,7,9,4,5,6,5,4,9,4,1,8,9,1,1,9,2,2,3,9,1,1,5,9,1,3,1,3,4,5,1,3,4,6,4,6,6,5,8,9,9,7,
,6,8,8,8,7,9,8,7,6,9,7,9,8,8,6,8,9,7,8,6,8,6,8,6,7,8,6,5,5,8,6,5,6,8,3,7,8,5,1,9,9,3,4,9,9,3,4,9,
8,5,6,9,8,4,6,8,4,4,9,5,9,9,3,4,3,3,3,1,1,1,1,1,1,1,1,1,1,1,1,5,5,6,4,9,7,5,9,9,9,6,9,9,6,6,9,6,9,7,
,6,6,9,5,5,4,7,4,4,9,1,4,1,1,1,1,1,1,1,1,1,1,1,1,1,8,1,6,1,1,5,1,5,1,3,1,4,4,1,1,1,1,1,1,1,1,1,1,
1,1,2,4,1,3,1,3,4,3,7,6,9,7,8,9,5,8,6,8,7,5,5,7,9,5,5,6,6,4,6,6,4,3,7,3,4,8,5,3,7,9,3,5,5,7,6,7,6,
,9,4,5,8,4,3,7,8,6,5,8,9,4,9,8,4,8,9,8,6,5,8,8,7,5,7,2,6,4,3,1,5,6,3,6,8,6,5,8,7,3,9,9,4,3,9,8,2,
6,9,6,3,4,5,8,8,3,5,5,4,1,3)
> x1 <- c(8,7,5,9,9,3,3,5,5,3,7,5,4,7,8,4,4,9,9,6,7,9,8,9,9,8,9,9,9,9,5,9,6,5,8,6,8,5,6,6,2,6,9,4,
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,7,9,9,5,9,9,8,4,8,8,6,7,8,4,7,6,8,7)
> x <- c(x0,x1)
> y0 <- c(9.391811581,9.683842779,15.80590066,18.93927034,16.99352399,12.87795684,12.22992791,13.
28139291,12.19005625,8.499737098,8.693715237,10.71927558,9.616916812,9.676434631,9.881671935,10.3
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587,12.24198597,11.54955688,11.65199956,11.64120558,10.56788492,9.957343032,10.59262397,10.578772
5,9.443628349,8.520502425,8.356403918,7.933371651,7.655175708,7.114709879,6.411794292,5.935772002
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.802832227,0.587491136,0.909747015,1.162055636,0.947725714,0.686921259,1.676442246,2.09461138,0.9
81393575,1.414334533,2.88695077,2.611623054,1.717761246,0.826947178,2.072375631,2.786070724,1.568
545654,0.648159274,1.821246633,2.227302547,1.485233141,1.286437996,1.763034851,1.531118996,0.9904
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2.382347785,3.608802678,2.71943019,2.285955541,2.299837876,2.931637776,2.772118769,2.526205648,1.
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66,3.375517566,4.40515046,4.041115695,3.077778028,2.816854576,2.805171013,3.535335953,3.852705169
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6.33130491,19.60209799,23.45672231,24.67908864,23.97639112,25.68934611,28.51300516,24.92849213,23
.57427399,21.08715239,21.05922204,14.56624704,13.65823707,7.787706907,5.318271423,5.132308036,4.1
53937282,4.322147064,3.233576257,3.058710524,2.945691704,3.205824062,3.605523728,2.86216675,3.243
864781,3.613222374,3.556828179,3.534314597,3.530788387,3.554079455,4.036782619,2.763979684,2.5856
25332,1.795550861,1.48552703,2.11016433,2.111724901,1.143904524,1.299147996,1.836187432,1.6123380
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3.477568719,2.670541138,3.642490655,5.290285186,4.138407848,4.210506346,3.636858595,3.175074661,3
.596972919,3.708148196,2.584699641,3.024520778,3.639085689,3.530999659,2.797527369,3.812974774,4.
944281579,4.434345161,3.470773144,4.545914381,6.374769943,5.738289472,5.29524455,5.994951417,6.55
5903131,6.07060058,6.469209464,7.313687239,7.432805586,7.529862202,8.530632183,9.049556479,8.1253
27045,8.239208288,9.228284869,9.463037035,8.328382212,8.886811426,10.29288771,10.05149986,8.15598
2211,8.994081594,10.89325016,9.611781777,8.802574722,6.571198011,7.880717866,7.514596778,5.657154
933,3.389925468,4.352035944,5.034991216,3.472823627,1.525346488,0.757981316,1.406779727,1.0812927
26,0.649095872,1.198355323,1.499415111,1.340379418,0.893187989,1.278423895,1.334387353,1.39348445
7,1.244000331,1.227583929,1.38197805,1.681032703,2.187774347,1.578567194,1.735180057,1.765839536,
```

```

1.898468293,1.332823134,1.451257254,1.552825913,1.000296472,0.5940375,0.989730405,1.377803789)
> y1 <- c(0.803819766,0.395028741,0.452981303,0.561235148,0.936592234,1.367158686,1.017229473,0.5
92968461,1.111499587,1.369705989,1.284588521,1.347722461,1.876878258,1.551077273,1.600325804,1.67
9432489,1.990267141,1.635222327,1.69607927,2.27315186,2.683340794,2.563652465,2.78676831,1.730288
152,1.708704913,1.597506924,1.701144809,1.996799001,1.474506736,1.611610738,1.08359707,0.61173434
1,0.810372952,1.270810611,0.719443484,0.598904793,0.450959114,0.556676803,1.422163386,0.756895111
,0.899586192,1.118242974,1.746553598,1.273674811,0.83239322,1.029406883,0.692347813,0.628751313,0
.584689735,0.73688909,0.684824938,0.37737413,0.440582241,1.211767345,1.263814198,1.765737204,0.91
0096553,3.659040012,1.298354,2.17438625,2.429063196,1.230236321,0.633554341,1.179443496,1.1699050
44,0.689447671,0.651023522,0.503791493,0.29669562,0.857158831,0.786635714,1.01071026,1.280115748,
1.762959731,1.912436547,2.183250261,2.334027553,2.596249775,2.336812451,3.231447195,1.905275343,2
.683603426,2.871902901,2.296340183,2.309828081,0.828568075,1.119669138,1.608237034,1.566750438,0.
986513478,1.171137337,1.651967476,1.262281949,1.236931473,2.151485359,2.496622089,2.808738467,1.7
75625729,1.286928794,2.536152585,3.615225875,4.053873493,3.535879868,2.258154938,3.669009681,3.20
5715505,1.862697603,2.542508255,2.018631807,0.840261369,0.818684507,0.655326019,1.180200371,1.069
230728,0.838758165,1.106649396,1.385803024,1.726895741,1.469813747,1.566424275,1.911190561,1.8658
38414,2.523789748,0.724710852,1.275129071,1.480819914,1.540375246,1.709791259,3.147205465,3.54708
1893,2.041533187,1.273432317,1.619344903,1.943675712,1.82501011,2.595866831,2.172180967,1.8734338
69,1.956148772,1.964904444,1.706872967,1.459501473,1.619053672,1.562397481,1.454737269,1.35679249
,0.68034712,0.529938297,0.659055461,0.568451577,0.223952773,0.62879918,0.426374602,0.738123674,1.
006368846,1.02010978,1.943973173,2.181809599,5.403819076)
> 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 = 21933516, p-value = 1.448e-15
alternative hypothesis: true rho is not equal to 0
sample estimates:
      rho
-0.3608916

```

```

> # ---- 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:
-0.4322545 -0.2849706
sample estimates:
      rho
-0.3608916

```

```
>
```