

```
R version 4.3.1 (2023-06-16 ucrt) -- "Beagle Scouts"
Copyright (C) 2023 The R Foundation for Statistical Computing
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(8,5,6,2,9,1,6,7,4,5,8,5,3,6,9,3,1,9,5,1,5,9,4,1,6,8,1,1,1,1,7,6,1,5,4,4,3,6,5,5,8,8,9,8,
,6,8,7,8,8,9,8,7,6,8,7,9,9,8,5,8,9,6,7,6,8,6,8,7,7,8,5,5,5,8,6,5,7,7,1,6,8,4,3,8,8,3,4,9,9,1,4,9,
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,4,3,7,8,4,5,8,9,4,9,9,4,7,8,8,6,5,7,7,6,5,7,1,6,4,1,5,5,3,5,8,7,5,9,7,3,9,9,4,2,9,9,1,7,9,5,3,4,
5,8,8,3,6,5,4,2,3,8,8,6,8,9)
> x1 <- c(3,1,6,5,1,7,6,4,8,9,4,4,9,9,6,8,9,8,9,9,8,9,9,9,9,6,9,6,5,8,6,8,6,7,7,1,7,9,5,8,8,8,9,9,
,8,8,9,7,9,9,9,8,9,9,9,9,9,8,9,9,9,8,8,8,9,9,9,5,8,3,4,1,8,5,2,6,6,6,5,7,7,8,5,9,8,9,7,9,9,
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,9,6,3,8,8,7,7,8,4,7,7,9,7)
> x <- c(x0,x1)
> y0 <- c(18.3649968,14.02035381,8.574023717,8.662705879,8.177981309,7.572595814,5.689852363,7.45
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```

```

372836307,1.220191484,1.13976682,1.317480753,1.068240662,1.058146556,1.25481989)
> y1 <- c(1.477577699,1.548139983,1.083953804,1.670902581,2.235917763,4.351617301,3.138304752,3.3
6039292,1.934425259,0.940123794,1.971040508,2.400668636,1.71920131,1.139408938,2.105169418,2.6402
83985,1.803559173,0.520537654,1.899645879,2.469457082,3.282065002,2.819902872,2.321737365,2.07598
5116,1.684387808,2.231295874,1.654331879,1.342317682,1.568879865,2.084781876,0.839500747,1.431711
8,2.755637561,3.031018479,2.998284514,2.459981146,1.014935566,0.966568977,1.347356459,1.182776175
,0.674938151,0.667261375,0.133051913,1.1353221,1.577723405,2.041164573,2.190474259,2.115932215,1.
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6,3.153047232,2.508259402,2.495236246,3.148145117,3.366797139,2.43022477,2.759923398,3.349012941,
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51193,0.861810967,0.947636297,1.324247808,0.773521174,0.158186845,0.393290963,0.272008171,0.31629
2354,0.12785032,0.386273904,0.877960931,0.877120672,0.582501026,0.557667303,0.614301152,0.6896370
24,0.924413966,0.502141747,0.234361225,0.636411245,0.413748368,0.236060298,0.304829944,0.14521456
5,0.201455371,0.557965646,1.071396791,1.074993245,0.780897246,2.689916817,6.863089058,9.831094699
)
> 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 = 21604539, p-value < 2.2e-16
alternative hypothesis: true rho is not equal to 0
sample estimates:
      rho
-0.3852584

```

```

> # ---- 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:
-0.4684689 -0.3029937
sample estimates:
      rho
-0.3852584

```

```
>
```