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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)

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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(-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38
.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-3
8.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-
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,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.4
6,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.
46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38
.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-3
8.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-
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6,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.
46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46)
> x1 <- c(-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38
.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-3
8.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-38.46,-
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-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19)
> x2 <- c(-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19,-110.19
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.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.
79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.7
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> x4 <- c(-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79
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.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.
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.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.
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9,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79)
> x5 <- c(-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79,-105.79
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05.79,-105.79,-105.79,-105.79,-105.79)
> x <- c(x0,x1,x2,x3,x4,x5)
> y0 <- c(383,383,310,304,297,248,243,234,635,635,635,635,635,598,598,343,345,343,345,343,343,327
,327,295,49.8,295,291,245,41.8,675,675,675,623,623,345,345,345,327,327,306,299,297,268,264,249,25
3,249,249,243,240,234,200,203,177,128,99.5,41,36.4,675,675,675,675,675,675,675,675,675,675,675,67
5,675,674,672,624,624,624,624,624,624,623,623,623,622,511,456,446,405,356,345,345,345,345,345,344
,344,344,344,344,344,344,313,331,332,331,319,319,327,317,321,309,306,294,299,298,252,265,264,251,
251,252,252,252,251,251,229,220,227,225,222,212,222,221,203,195,189,176,178,163,153,138,120,120,1
16,113,110,102,100,100,99,95.8,88.7,89.1,88.3,87,86.2,79.9,86.6,80.3,675,675,675,675,675,655,456,
346,346,340,330,330,330,330,330,330,325,287,266,267,253,251,251,233,220,203,185,97.5,89.1,41.4,65
4,654,604,604,349,343,343,331,327,327,327,272,289,289,261,261,254,177,80.7,215,191,158,138,102,63
.6,63.6,59,49.8,675,675,623,623,345,346,345,306,298,281,265,266,253,201,202,179,128,99.1,97.9,48.
9,43.1,41,36.4,669,348,330,327,299,266,249,665,665,665,665,665,665,665,614,503,452,345,344,333,33
2,325,306,296,266,252,249,220,179,85.3,46,41.4,675,675,675,623,623,616,345,344,345,332,332,331,33
2,325,306,263,248,252,249,220,200,203,177,99,41,36.4,675,675,675)
> y1 <- c(623,623,345,344,345,332,332,331,332,325,306,297,264,264,249,252,249,249,221,200,203,177
,99,41,674,674,674,674,674,622,512,456,346,345,332,332,327,307,297,266,253,249,249,220,177,88.7,4
1.4,36.4,662,610,610,610,610,609,608,344,343,343,333,333,327,327,305,291,291,261,261,259,258,258,
251,200,115,59,663,663,615,615,615,499,451,345,343,331,332,319,322,322,305,294,294,268,251,247,24
6,220,178,85.3,41.4,281,248,248,203,189,173,169,157,156,151,134,123,90.3,89.5,406,387,387,387,387
,386,386,348,347,347,347,347,347,346,230,230,230,230,226,225,219,219,202,176,49.8,198,167,149,146
,131,130,125,119,119,118,118,104,103,102,404,402,403,402,403,394,394,394,394,394,244,222,228,229,
229,229,217,217,199,202,201,201,174,172,163,151,153,151,151,136,127,124,120,120,117,117,117,117,1
16,112,87.4,84.9,79.9,77.8,73.6,73.2,59.8,55.6,49.8,49.8,46.8,824,799,492,431,430,430,431,431,402
,403,392,404,393,393,402,392,392,402,404,394,394,404,404,404,404,404,404,404,404,403,403,394,403,
403,402,402,394,394,394,394,396,393,394,394,395,394,394,394,394,394,394,394,394,394,394,394,394,3
94,394,335,318,308,287,263,229,238,234,229,229,229,229,229,229,229,229,229,228,228,228,228,228,22
6,208,217,218,217,216,212,210,208,190,202,201,201,189,176,177)
> y2 <- c(175,174,164,802,404,403,404,404,394,394,402,404,394,394,394,394,337,303,230,230,226,217
,217,217,217,217,217,216,200,176,176,163,163,151,151,138,124,120,120,120,120,120,120,117,117,117,
117,114,87,79,79,78.2,58.1,56,411,410,389,389,368,368,368,368,274,220,227,226,220,219,219,217,201
,201,174,174,160,161,161,140,138,85.3,80.7,127,121,119,119,117,108,105,102,88.3,88.3,83.2,80.3,81
.1,75.3,75.3,61.9,64,50.6,47.2,43.9,41.8,39.7,404,402,402,404,394,394,394,394,348,244,225,229,229
,229,229,208,199,202,200,176,176,164,141,118,117,116,112,84.1,77.4,78.2,74.4,57.7,50.6,46,402,374
,231,218,217,202,177,165,154,120,120,117,89.9,82.4,776,402,402,402,403,402,402,402,401,374,374,37
4,375,375,374,373,374,374,332,313,233,228,227,224,217,216,216,202,177,162,157,135,119,118,115,115
,115,114,94.1,87.4,46,37.6,771,404,404,402,402,403,394,393,393,393,393,336,222,228,229,229,229,20
7,217,217,216,217,215,199,201,174,162,151,151,136,118,117,117,117,112,90.8,84.1,78.2,72.4,71.9,59
.4,57.3,55.2,51.9,49.3,46.8,404,402,402,403,404,394,394,394,394,394,336,222,228,229,229,229,208,2
17,217,216,217,215,199,201,201,174,174,162,151,151,151,136,118,117,117,117,112,91.2,87.4,84.1,78.
2,77.8,72.4,73.6,71.9,59.8,57.7,55.6,51.9,49.8,46.8,796,404,402,403,403,403,402,392,393,393)
> y3 <- c(393,393,393,393,337,318,236,230,230,222,218,217,216,201,200,174,164,151,137,120,117,117
,117,112,87.4,75.7,74,73.6,50.2,417,417,417,417,393,395,394,367,367,367,367,367,367,367,232,227,2
27,225,219,219,217,217,202,202,174,171,166,161,161,160,160,134,115,120,120,119,120,119,117,116,11
6,110,86.2,77,74,59.8,59.4,58.1,774,425,425,420,402,401,374,373,373,373,372,372,333,286,228,227,2
27,222,217,215,216,215,204,199,180,176,161,154,154,135,120,120,120,120,117,116,116,104,87.4,83.6,
71.5,63.1,46.8,45.6,798,404,404,404,404,402,402,394,394,394,394,394,394,394,337,318,225,229,229,2
29,217,216,215,200,200,176,160,151,151,135,120,116,116,114,112,79,78.2,74,71.5,55.6,48.9,46.4,798
,404,404,404,404,402,402,394,394,394,394,394,394,394,337,318,225,229,229,229,217,216,215,200,200,
176,160,151,151,135,120,116,116,114,112,79,78.2,74,71.5,55.6,48.9,46.4,352,352,278,270,266,214,21
4,206,614,614,605,604,604,603,600,298,295,294,294,285,285,285,285,285,255,253,217,735,725,725,722
,716,312,286,286,286,276,276,264,264,255,233,212,205,200,186,178,174,171,164,126,91.6,84.9,82.4,7
0.7,58.5,56.9,52.3,46.8,735,735,735,735,734,734,734,733,732,725,724,724,723,722,722,722,722,722,7
22,722,722,722,722,722,721,720,720,720,709,639,626,491,504,437,440,406)
> y4 <- c(392,317,312,286,284,286,286,286,286,286,286,286,284,276,276,276,275,275,275,264,262,240
,240,232,226,207,212,207,205,189,199,185,189,186,186,183,182,170,175,163,167,166,164,149,127,39.3
,130,131,130,130,127,127,124,110,99,99.1,99.5,99.5,95.4,90.3,90.8,90.3,91.2,79.5,734,733,722,722,
721,720,504,312,312,286,287,286,285,286,285,285,285,285,285,244,200,197,197,183,180,174,126,99,90
.8,82.4,696,694,683,683,301,301,289,284,267,256,256,230,245,243,226,208,208,202,202,156,117,115,8
6.6,77.8,68.6,53.1,43.9,39.7,733,721,721,714,296,286,286,276,256,253,213,200,186,180,164,128,125,
94.1,91.6,82.4,82.4,70.7,58.5,57.7,51,46.8,691,316,288,281,265,206,204,704,704,703,695,694,694,69
3,693,691,477,309,288,288,281,277,278,260,222,200,166,121,99,91.2,71.1,51.9,45.6,734,729,729,722,
714,675,297,309,287,287,284,276,257,253,232,212,186,179,177,174,164,124,91.2,82.8,82.8,79,70.7,58
```

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.5,56.9,52.3,46.8,735,730,729,722,716,298,308,287,287,284,276,258,253,232,212,212,205,199,186,180
,178,174,164,124,91.2,82.8,79.5,82.4,70.7,58.5,56.9,52.3,46.8,734,733,732,723,721,721,721,503,313
,286,285,287,276,233,216,213,205,197,164,125,99,91.2,70.7,57.3,51.9,46.8,696,684,684,684,684,683,
683,300,300,289,289,285,279,278,259,258,259,254,207,206,184,182,182,165,51.4,703,702,694,693)
> y5 <- c(692,691,476,309,289,289,289,289,282,279,261,251,232,205,199,175,165,122,99.5,91.2,69.4,
53.9,51.9,45.6,733,733,731,723,721,720,720,502,307,288,286,286,276,233,210,200,193,183,170,164,12
9,99,91.2,82.4,70.7,56,51.4,46.8)
> y <- c(y0,y1,y2,y3,y4,y5)
> cor.test(x, y,alternative = "two.sided", method = "spearman", exact=FALSE )

        Spearman's rank correlation rho

data:  x and y
S = 493862706, p-value < 2.2e-16
alternative hypothesis: true rho is not equal to 0
sample estimates:
      rho
0.2073481

> # ---- 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:
 0.1613507 0.2517465
sample estimates:
      rho
0.2073481

>
```