

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())
> x <- c(-335.94,-320.91,-315.17,-313.9,-318.67,-307.54,-347.1,-319.33,-319.82,-306.24,-309.29,-3
12.28,-316.05,-304.51,-314.46,-319.75,-323.18,-317.97,-307.21,-315.6,-312.55,-287.91,-302.78,-313
.31,-275.57,-277.33,-303.47,-304.6,-305.93,-303.03,-306.56,-303.2,-305.03,-295.6,-267.78,-280.13,
-277.96,-273.56,-267.19,-278.79,-237.75,-208.55,-215.56,-203.5,-207.59,-210.71,-163.78,-160.53,-1
99.65,-161.28,-156.99,-151.11,-151.27,-146.33,-158.68,-161.84,-161.1,-154.35,-149.9,-162.63,-167.
26,-155.84,-150.73,-149.46,-153.39,-157.96,-151.07,-160.68,-155.52,-152.4,-154.82,-149.23,-183.97
,-149.52,-146.39,-152.72,-158.89,-152.74,-150.5,-154.48,-150.96,-158.45,-199.31,-145.37,-147.37,-
157.07,-160.25,-152.91,-155.75,-154.04,-144.45,-159.44,-147.45,-143.54,-144.74,-144.4,-141.38,-15
2.55,-139.02,-150.35,-145.14,-140.16,-146.45,-153.73,-149.89,-129.92,-158.9,-130.86,-139.56,-141.
68,-131.73,-147.62,-135.68,-128.46,-187.01,-131.67,-161.02,-161.96,-130.05,-139.07,-140.84,-130.5
6,-136.36,-144.12,-94.44,-120.82,-123.25,-93.01,-91.55,-91.44,-128.94,-93,-125.01,-128.31,-121.15
,-134.12,-121.57,-118.79,-120.21,-88.74,-118.16,-119.91,-88.66,-105.91,-149.94,-112.84,-90.56,-12
1.15,-83.22,-76.66,-82.72,-110.18,-95.85,-79.6,-78.51,-105.92,-80.23,-90.11,-80.8,-88.04,-81.67,-
81.31,-82.97,-104.74,-132.6,-84.82,-116.22,-68.46,-97.17,-75.39,-65.63,-64.27,-63.66,-63.49,-104.
28,-104.28,-64.77,-107.89,-52.68,-51.87,-53.19,-53.05,-53.23,-52.65,-49.66,-48.89,-49.6,-48.7,-49
.06,-39.34,-46.97,-37.28,-22.98)
> y <- c(-234.79,-226.74,-225.19,-223.37,-223.05,-223.04,-222.28,-218.91,-216.71,-216.01,-214.51,
-214.42,-212.94,-212.45,-211.25,-208.62,-206.54,-205.67,-205.54,-205.38,-203.78,-201.55,-200.39,-
199.15,-195.17,-194.16,-190.71,-188.21,-186.92,-186.82,-186.24,-184.7,-184.61,-182.38,-171.51,-16
5.17,-159.98,-159.56,-155.26,-149.33,-145.02,-126.69,-126.63,-118.68,-118.3,-118.25,-117.09,-116.
49,-116.11,-113.99,-112.37,-111.75,-110.87,-110.79,-110.52,-110.19,-109.69,-109.52,-109.25,-108.7
8,-108.02,-107.71,-107.5,-107.43,-107.05,-106.67,-106.13,-105.78,-105.72,-105.5,-104.63,-104.28,-
104.17,-103.59,-103.12,-102.97,-102.64,-102.26,-102.07,-101.89,-101.44,-101.43,-101.14,-101.07,-1
00.69,-100.56,-100.46,-100.41,-98.61,-98.45,-98.28,-97.74,-97.28,-96.67,-95.99,-95.66,-95.55,-95.
3,-94.99,-94.82,-94.05,-93.92,-93.82,-93.73,-93.46,-92.91,-91.98,-91.82,-91.26,-91.2,-89.39,-89.3
4,-88.76,-88.74,-88.74,-88.23,-87.38,-87.07,-86.7,-86.68,-83.32,-81.98,-80.48,-80.41,-79.16,-76.4
7,-76.35,-76.17,-76.14,-75.62,-75.2,-75.1,-72.93,-72.86,-72.3,-71.87,-71.75,-71.73,-70.8,-70.26,-
69.88,-69.32,-65.75,-63.53,-63.07,-62.63,-61.79,-59.43,-58.48,-58.18,-57.99,-57.29,-56.57,-55.75,
-55.56,-54.53,-53.6,-53.39,-52.13,-51.34,-51.13,-50.93,-50.1,-48.4,-47.61,-45.79,-43.51,-43.03,-4
1.78,-41.55,-38.46,-36.08,-34.93,-34.85,-33.43,-33.21,-31.14,-30.51,-27.29,-23.05,-22.45,-21.89,-
21.47,-21.45,-20.69,-19.36,-19.31,-18.49,-17.71,-12.75,-12.3,-2.01,7.99)
> cor.test(x, y, alternative = "two.sided", method = "spearman", exact=FALSE )
```

Spearman's rank correlation rho

```
data: x and y
S = 51544, p-value < 2.2e-16
alternative hypothesis: true rho is not equal to 0
sample estimates:
rho
0.9569805
```

```
> # ---- 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:
 0.9329790 0.9714545
```

```
sample estimates:
```

```
      rho
0.9569805
```

```
>
```