

Mann Whitney (Wilcoxon) test for unpaired data, i.e. two sample

Input Data (scroll as required):

	A	B
Obs.#		
1	93.3	88.89
2	91.1	87.78
3	95.6	86.66
4	88.9	93.33
5	88.9	94.44
6	83.3	93.33
7	90.0	91.11
8	90.0	92.22
9	88.9	94.44

The first column is an automatically generated observation number. This is not part of the actual input data, and is provided for reference. The data is interpreted as unpaired, hence rows, as well as order of the data in each column, have no particular meaning.

Results:

Mann Whitney test, also known as Wilcoxon rank sum test with continuity correction

Test statistic W : 309

p-value : 0.449580

There are ties in the ranks, so the exact p-value cannot be computed. The p-value shown is inexact but fairly robust when the number of ties is small.

null hypothesis $\mu_0 = 0.0$

alternative hypothesis: two sided, $\hat{\mu} \neq \mu_0$

95% confidence interval : -1.1399 ----- 5.5200

sample estimate of difference in location $\hat{\mu}$: 1.120030

R code to reproduce these results:

```
# Copy-paste these lines into the R command prompt.
# Lines that begin with the # character are taken as comment lines by R.
```

```
A <- c(93.3, 91.1, 95.6, 88.9, 88.9, 83.3, 90.0, 90.0, 88.9, 87.8, 92.2, 91.1, 87.8, 91.1, 91.1, 94.4, 91.1, 95.6, 92.2, 93.3, 91.1, 92.2, 87.8)
```

```
B <- c(88.89, 87.78, 86.66, 93.33, 94.44, 93.33, 91.11, 92.22, 94.44, 58.88, 65.56, 68.89)
```

```
wilcox.test(A, B, paired = FALSE, alternative = "two.sided", mu = 0.0,
  exact = TRUE, correct = TRUE, conf.int = TRUE, conf.level = 0.95)
```

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