

# Wilcoxon Signed Ranks test.

KEEL non-parametric statistical module

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## 1 Detailed results for BHCVRP

### 1.1 Results

VS	$R^+$	$R^-$	Exact P-value	Asymptotic P-value
OR-Tools	0.0	36.0	$\geq 0.2$	1

Table 1: Results obtained by the Wilcoxon test for algorithm BHCVRP

### 1.2 Confidence intervals for Median of differences

$\alpha=0.90$	Confidence interval	Exact confidence
OR-Tools	[0.34 , 550.755]	0

Table 2: Confidence intervals for algorithm BHCVRP ( $\alpha=0.90$ )

$\alpha=0.95$	Confidence interval	Exact confidence
OR-Tools	[0.34 , 550.755]	0

Table 3: Confidence intervals for algorithm BHCVRP ( $\alpha=0.95$ )

## 2 Detailed results for OR-Tools

### 2.1 Results

VS	$R^+$	$R^-$	Exact P-value	Asymptotic P-value
BHCVRP	36.0	0.0	$\geq 0.2$	0.009583

Table 4: Results obtained by the Wilcoxon test for algorithm OR-Tools

### 2.2 Confidence intervals for Median of differences

$\alpha=0.90$	Confidence interval	Exact confidence
BHCVRP	[-550.755 , -0.34]	0

Table 5: Confidence intervals for algorithm OR-Tools ( $\alpha=0.90$ )

$\alpha=0.95$	Confidence interval	Exact confidence
BHCVRP	[-550.755 , -0.34]	0

Table 6: Confidence intervals for algorithm OR-Tools ( $\alpha=0.95$ )