# Wilcoxon Signed Ranks test.

KEEL non-parametric statistical module

August 20, 2024

### 1 Detailed results for BHCVRP-act

#### 1.1 Results

VS	$R^+$	$R^-$	Exact P-value	Asymptotic P-value
BHCVRP	9.0	1.0	$\geq 0.2$	0.100348

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

#### 1.2 Confidence intervals for Median of differences

$\alpha$ =0.90	Confidence interval	Exact confidence
BHCVRP	[-13,497.665 , 163.82]	0

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

$\alpha$ =0.95	Confidence interval	Exact confidence
BHCVRP	[-13,497.665, 163.82]	0

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

## 2 Detailed results for BHCVRP

#### 2.1 Results

VS	$R^+$	$R^-$	Exact P-value	Asymptotic P-value
BHCVRP-act	1.0	9.0	$\geq 0.2$	1

Table 4: Results obtained by the Wilcoxon test for algorithm BHCVRP

#### 2.2 Confidence intervals for Median of differences

$\alpha$ =0.90	Confidence interval	Exact confidence
BHCVRP-act	[-163.82 , 13,497.665]	0

Table 5: Confidence intervals for algorithm BHCVRP ( $\alpha{=}0.90)$ 

$\alpha$ =0.95	Confidence interval	Exact confidence
BHCVRP-act	[-163.82 , 13,497.665]	0

Table 6: Confidence intervals for algorithm BHCVRP ( $\alpha = 0.95$ )