# Wilcoxon Signed Ranks test.

KEEL non-parametric statistical module September 2, 2024

### 1 Detailed results for BHCVRP-act

#### 1.1 Results

VS	$R^+$	$R^{-}$	Exact P-value	Asymptotic P-value
BHCVRP	0.0	36.0	$\geq 0.2$	1

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	[225.9, 1,553.42]	0

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

$\alpha$ =0.95	Confidence interval	Exact confidence
BHCVRP	[225.9, 1,553.42]	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	36.0	0.0	$\geq 0.2$	0.009583

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	[-1,553.42,-225.9]	0

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

$\alpha$ =0.95	Confidence interval	Exact confidence
BHCVRP-act	[-1,553.42 , -225.9]	0

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