

Projekt zaliczeniowy - Algorytmy minimalizacji stochastycznej

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Projekt polega na prostym opracowaniu statystycznym wyników porównania działania wybranych algorytmów minimalizacji stochastycznej.

Do porównania wybraliśmy poniższe algorytmy:

- Poszukiwanie przypadkowe (Pure Random Search, PRS)
- Metoda wielokrotnego startu (multi-start, MS)

oraz następujące funkcje do zminimalizowania:

- Funkcja Rastrigina
- Funkcja Schwefela

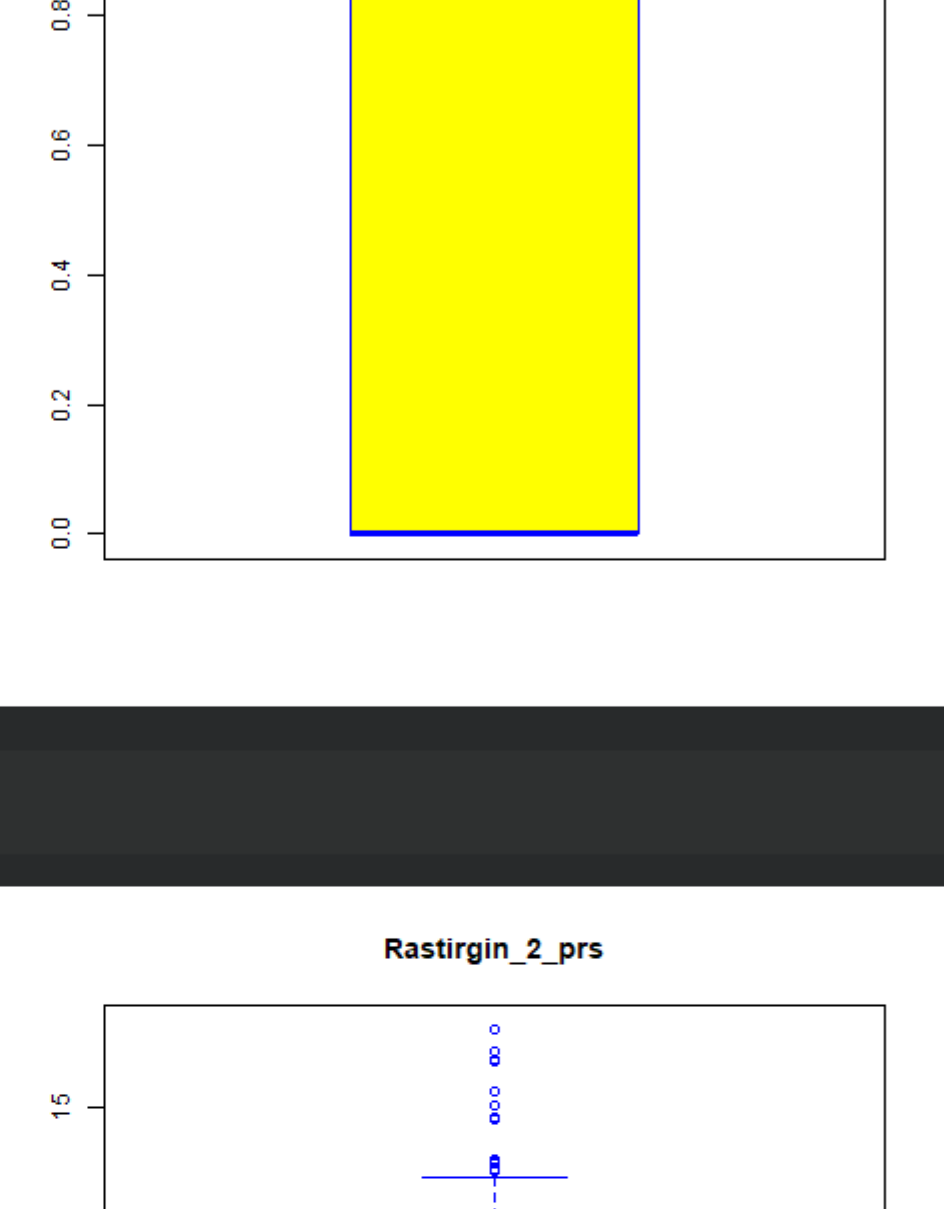
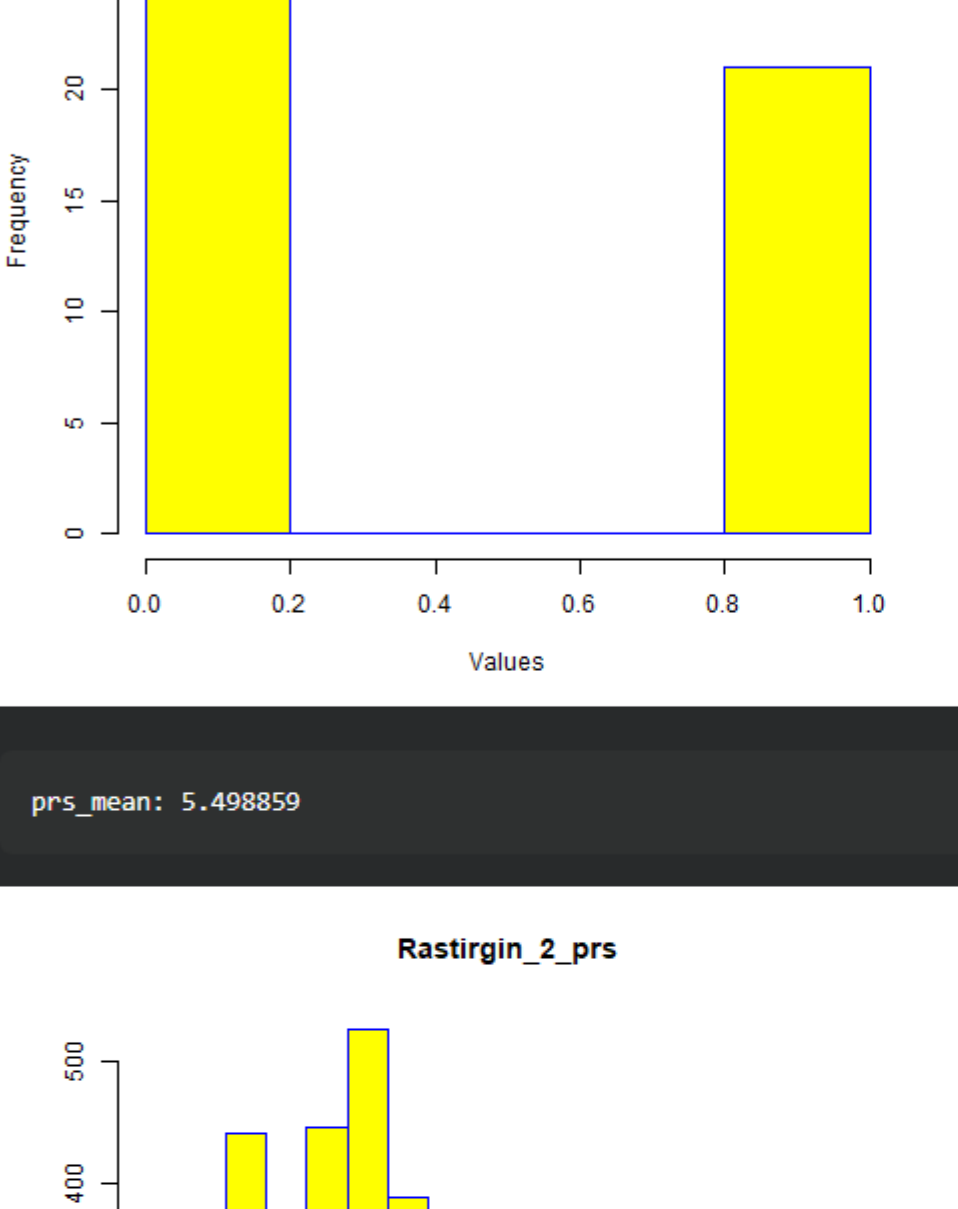
runs: 50

points: 100

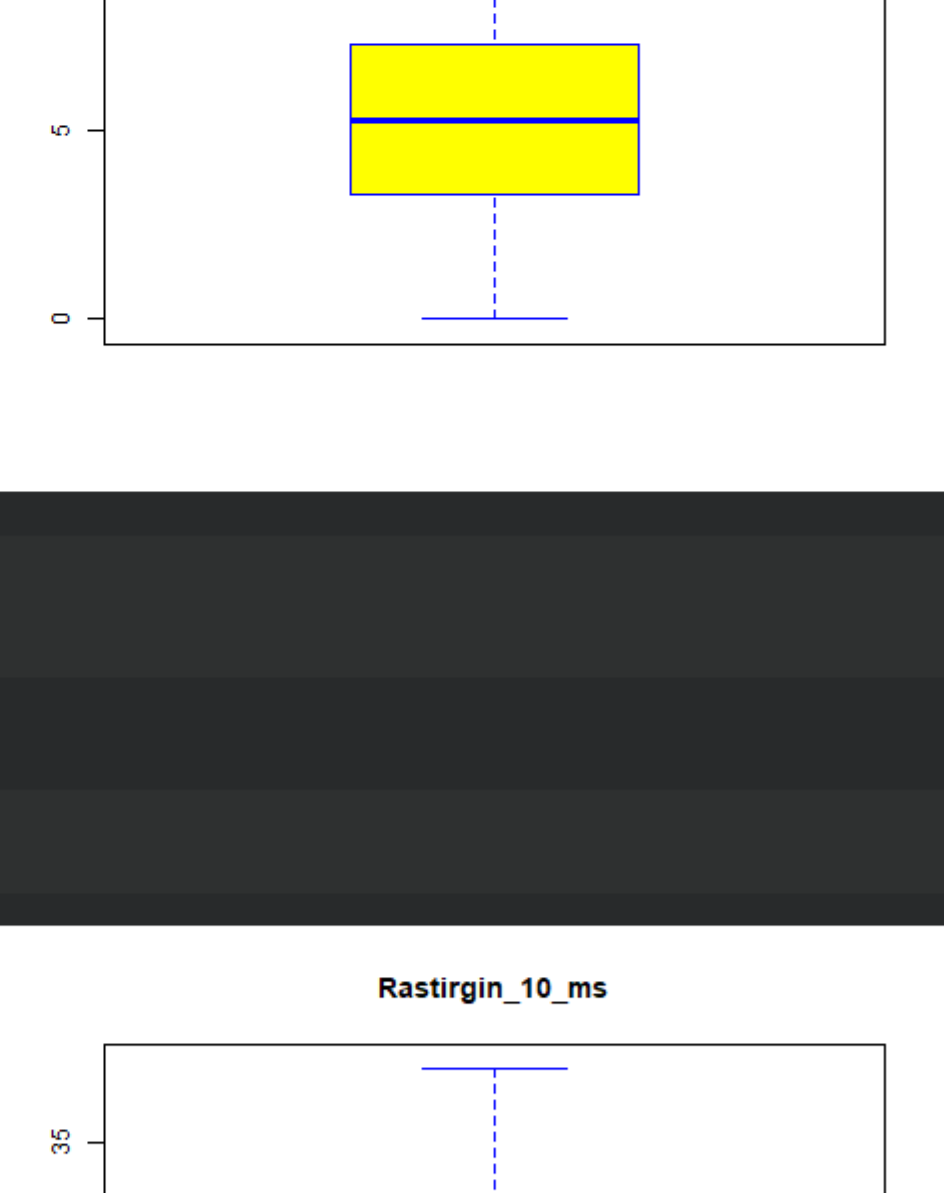
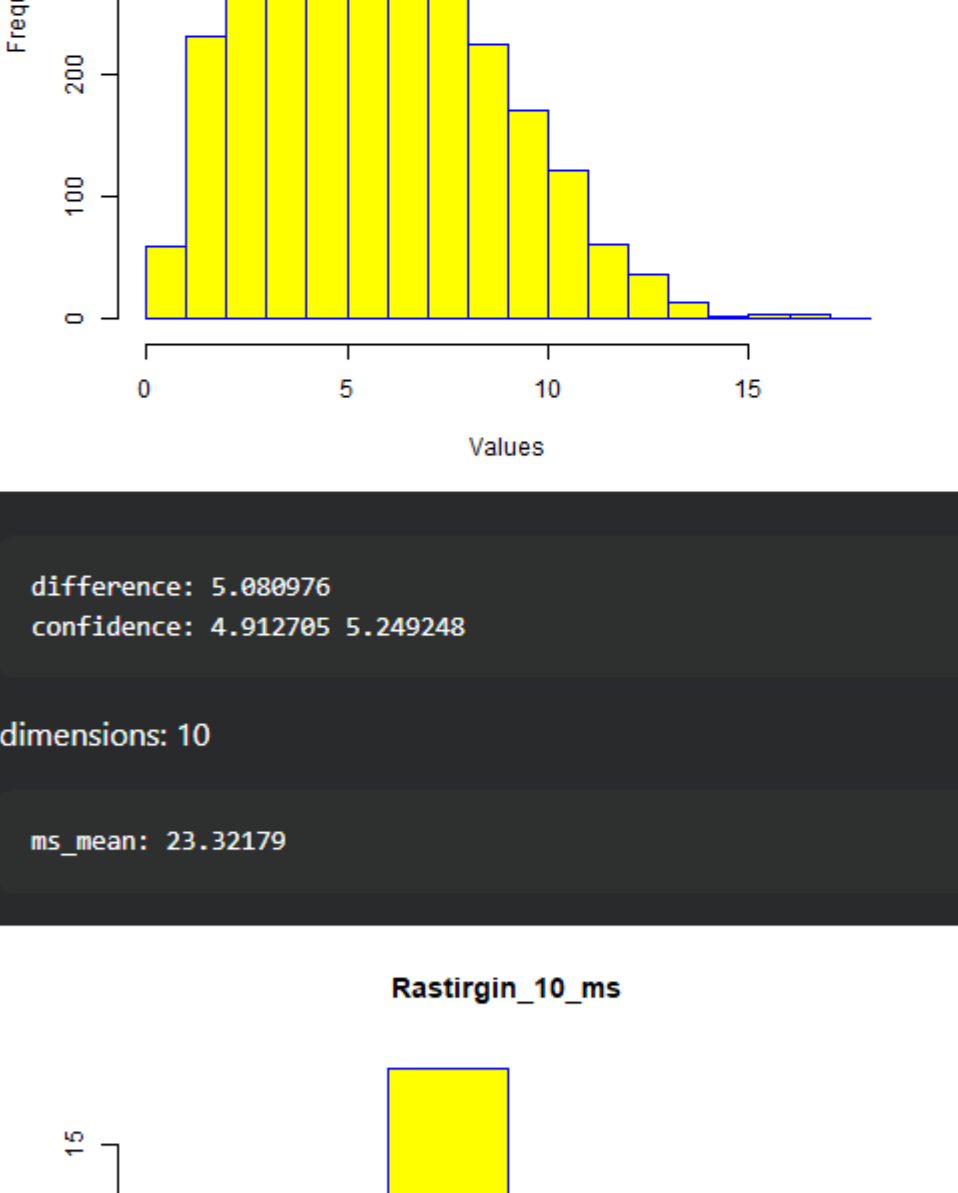
Rastrigin funtion:

dimensions: 2:

ms_mean: 0.4178828



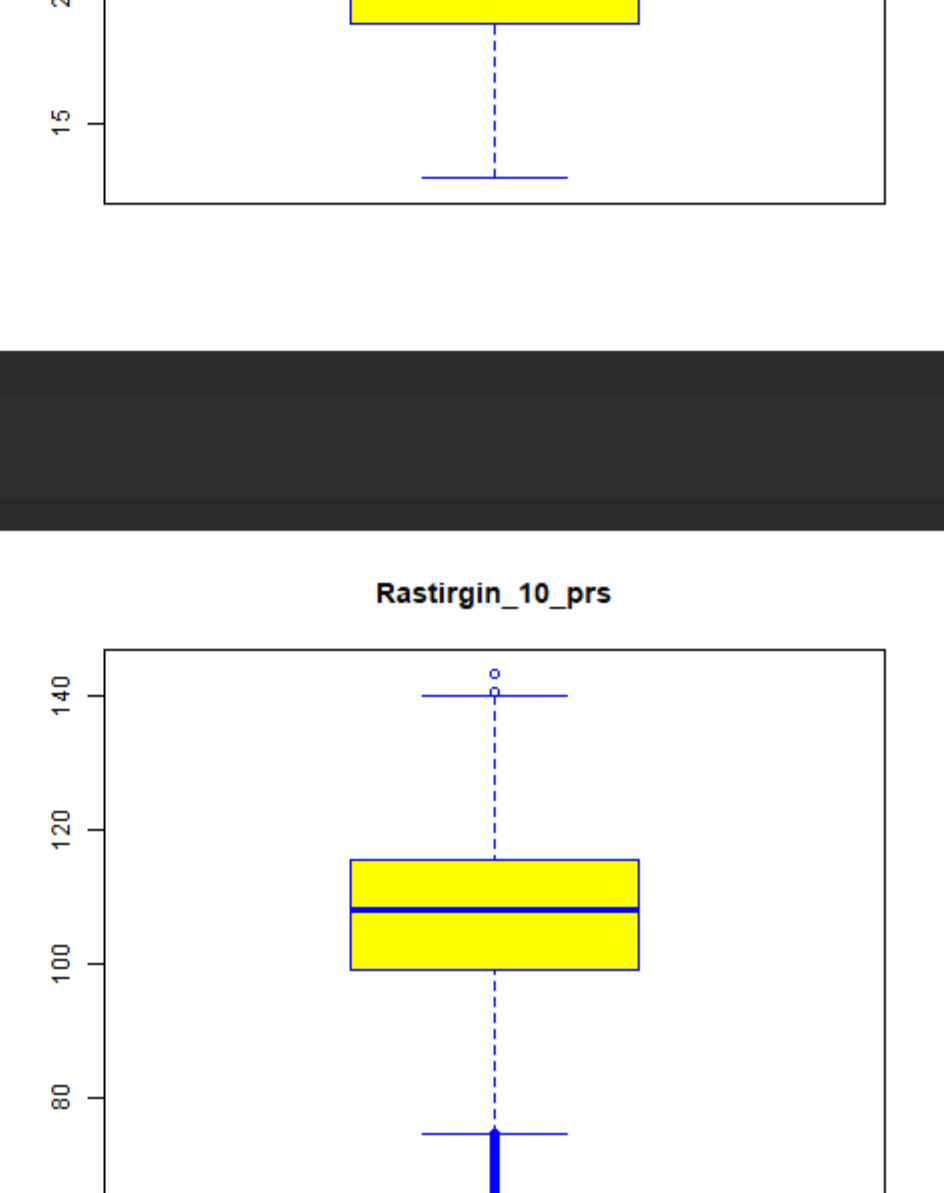
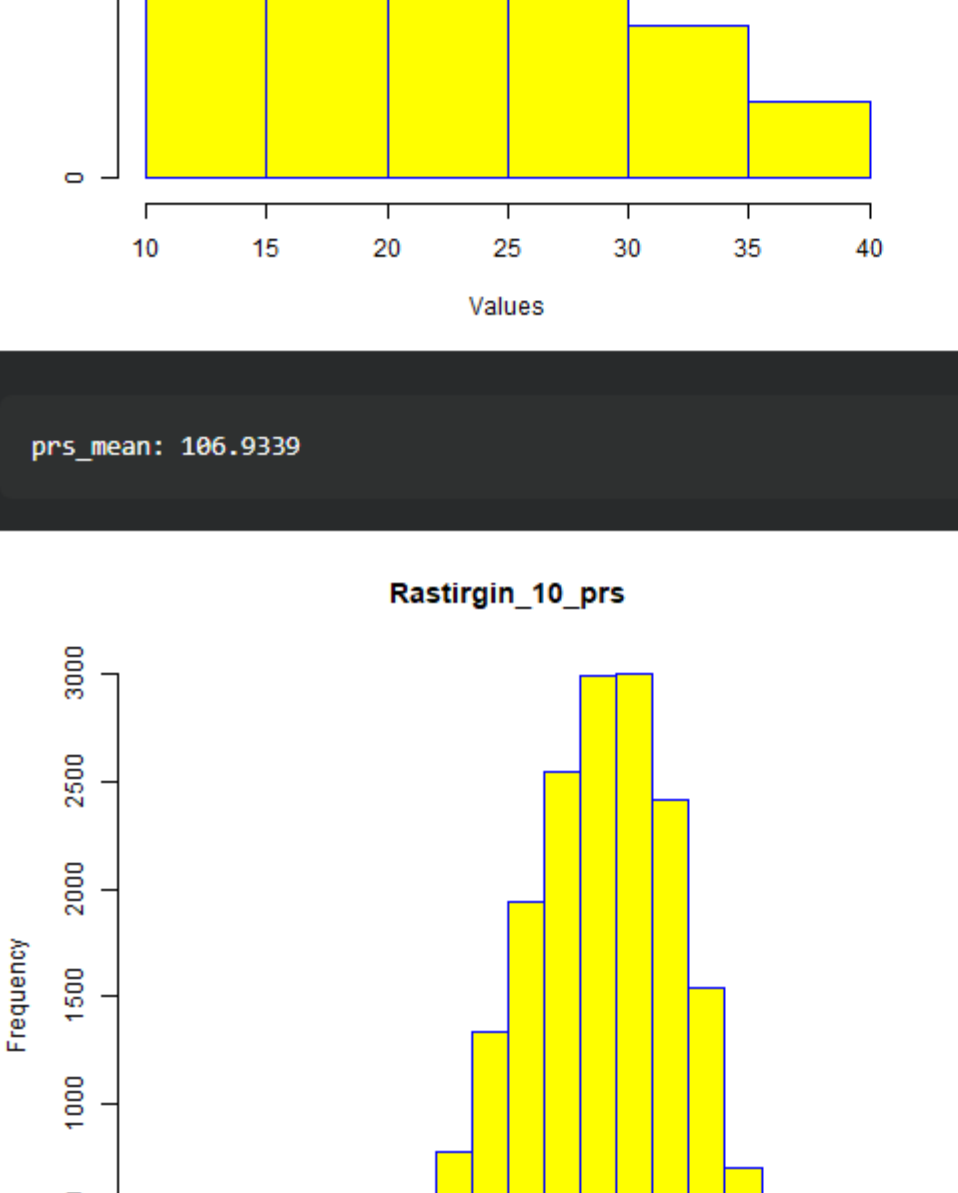
prs_mean: 5.498859



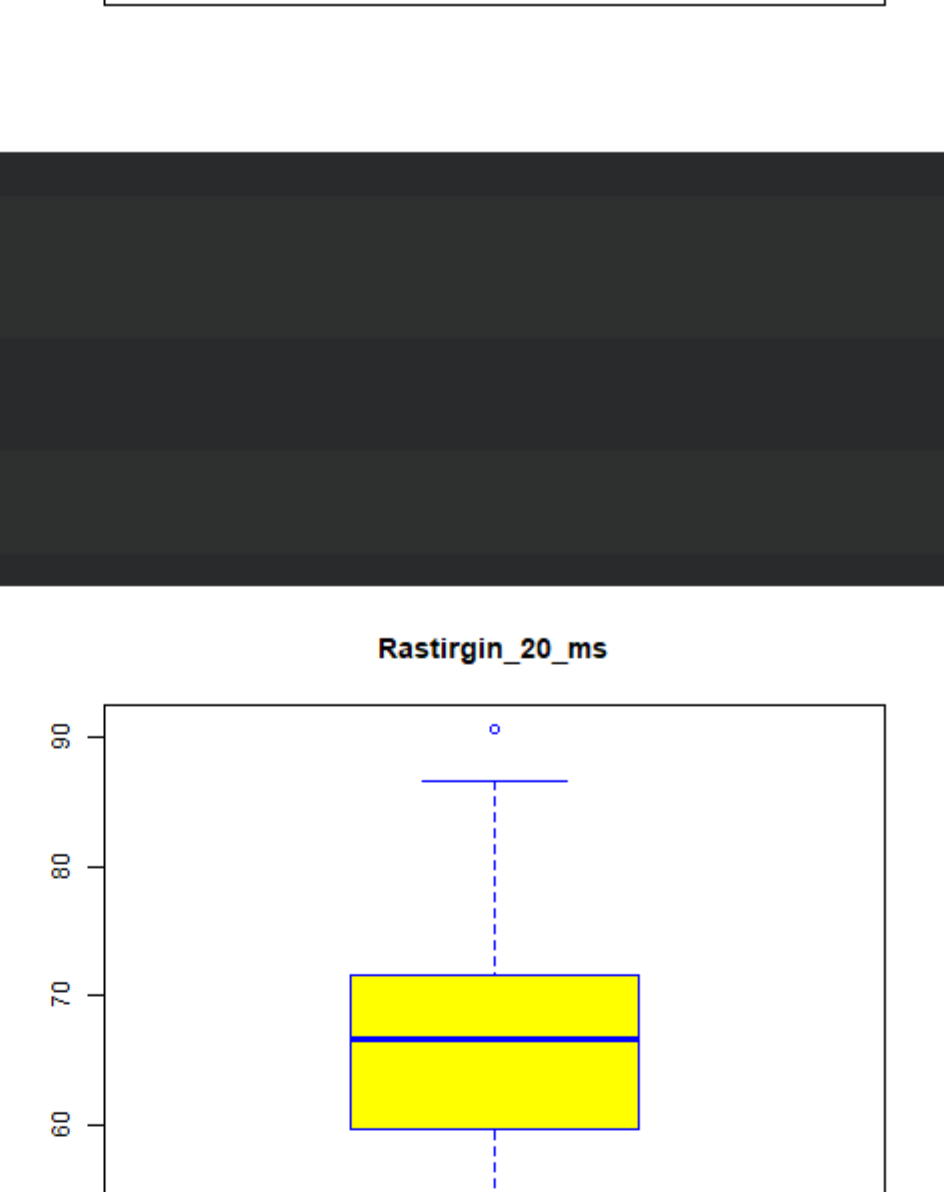
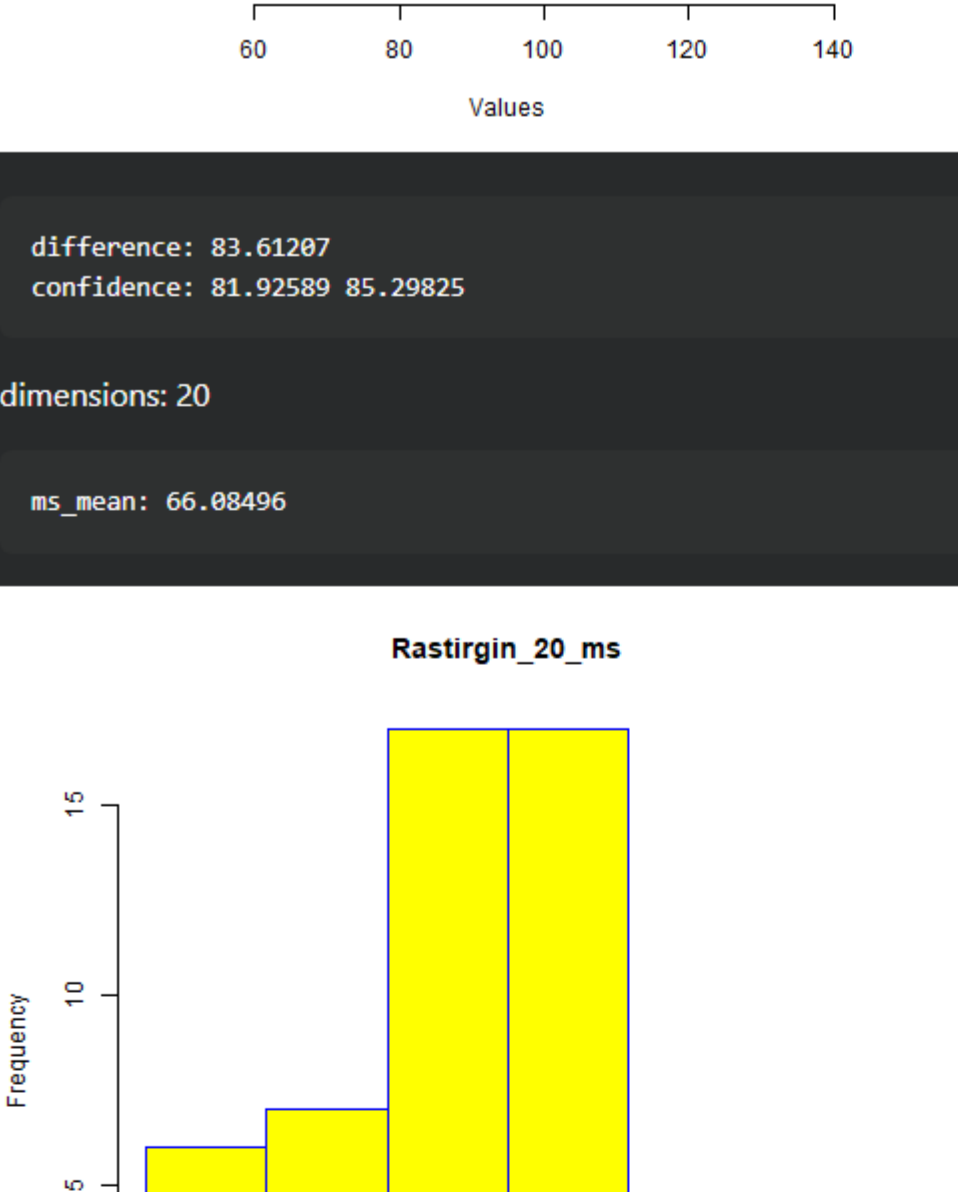
difference: 5.080976
confidence: 4.912705 5.249248

dimensions: 10

ms_mean: 23.32179



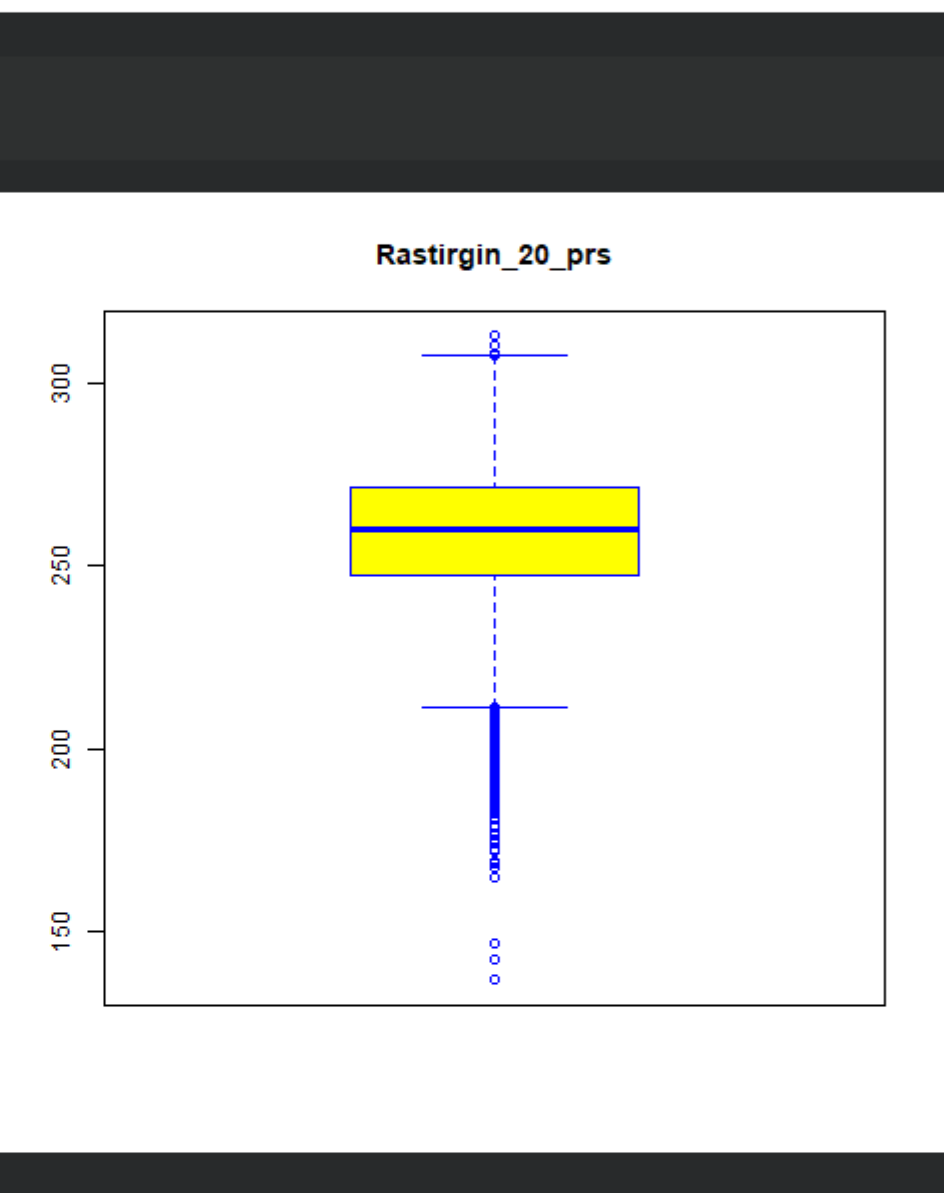
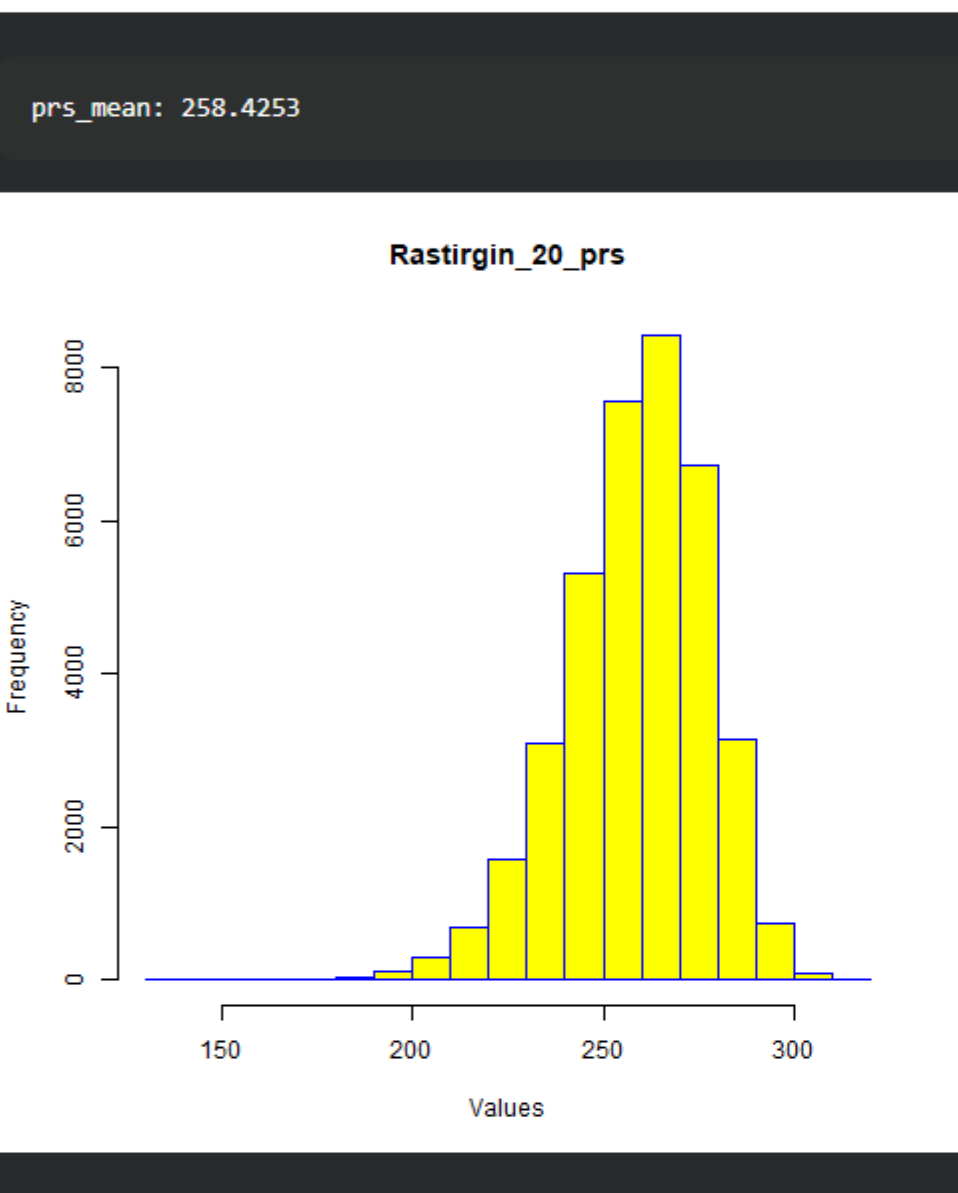
prs_mean: 106.9339



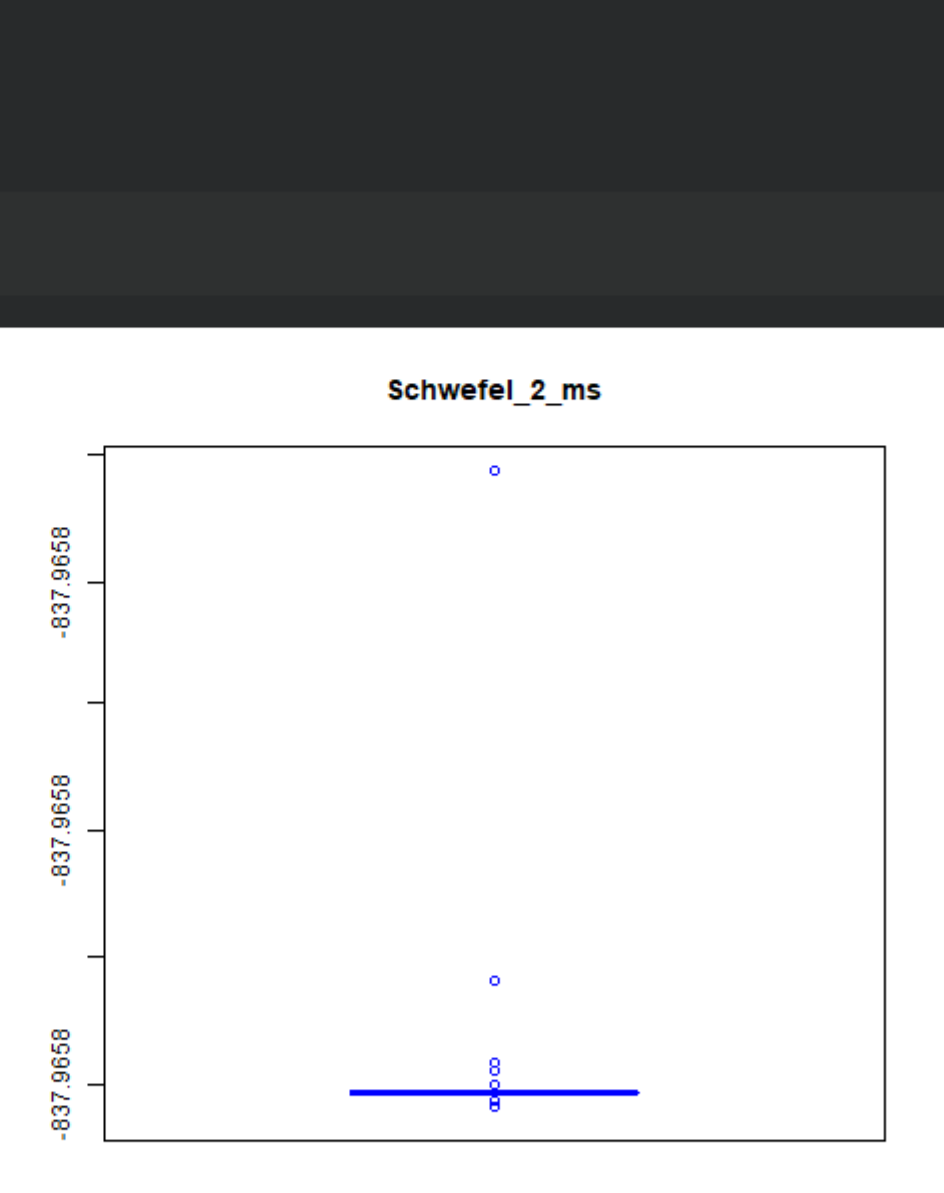
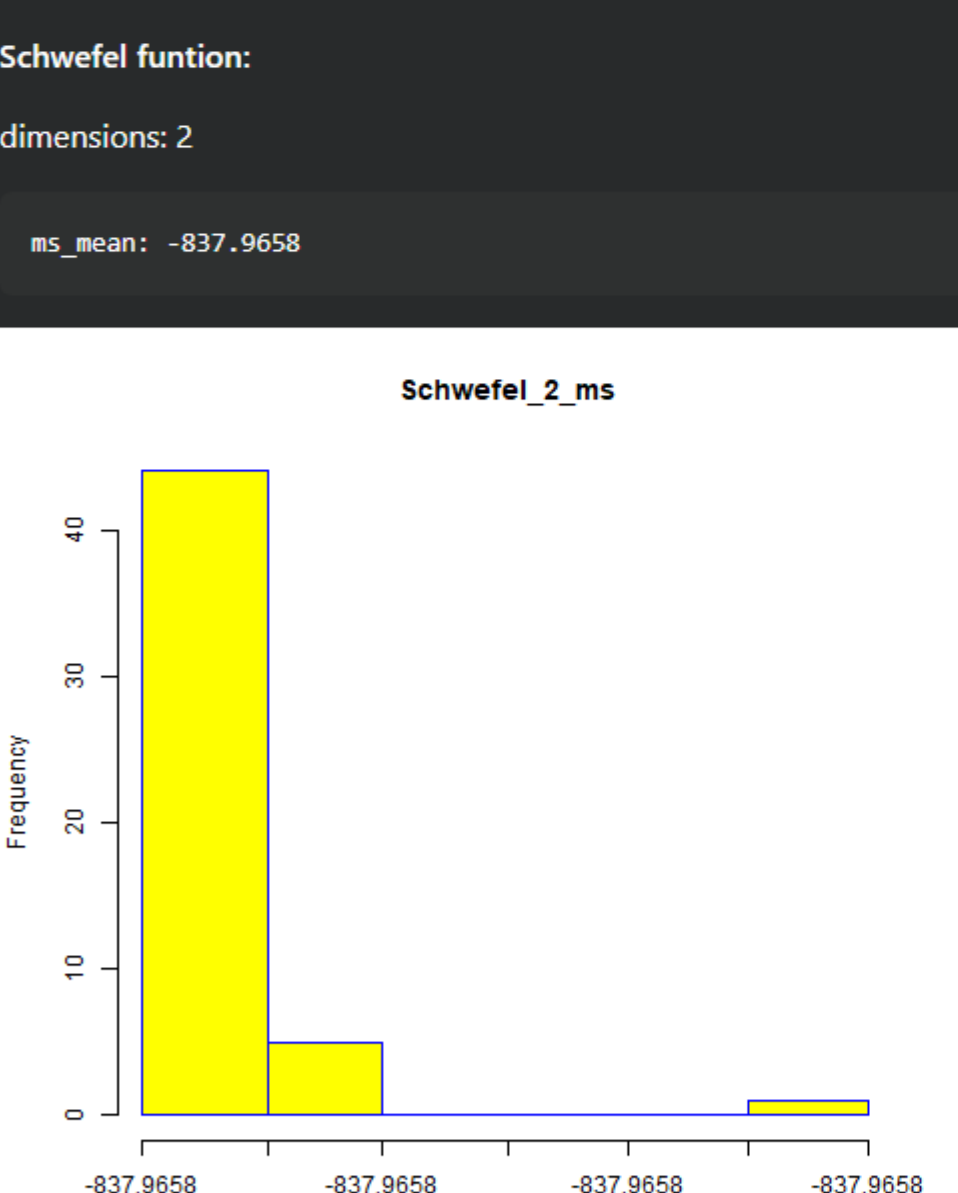
difference: 83.61207
confidence: 81.92589 85.29825

dimensions: 20

ms_mean: 66.08496



prs_mean: 258.4253

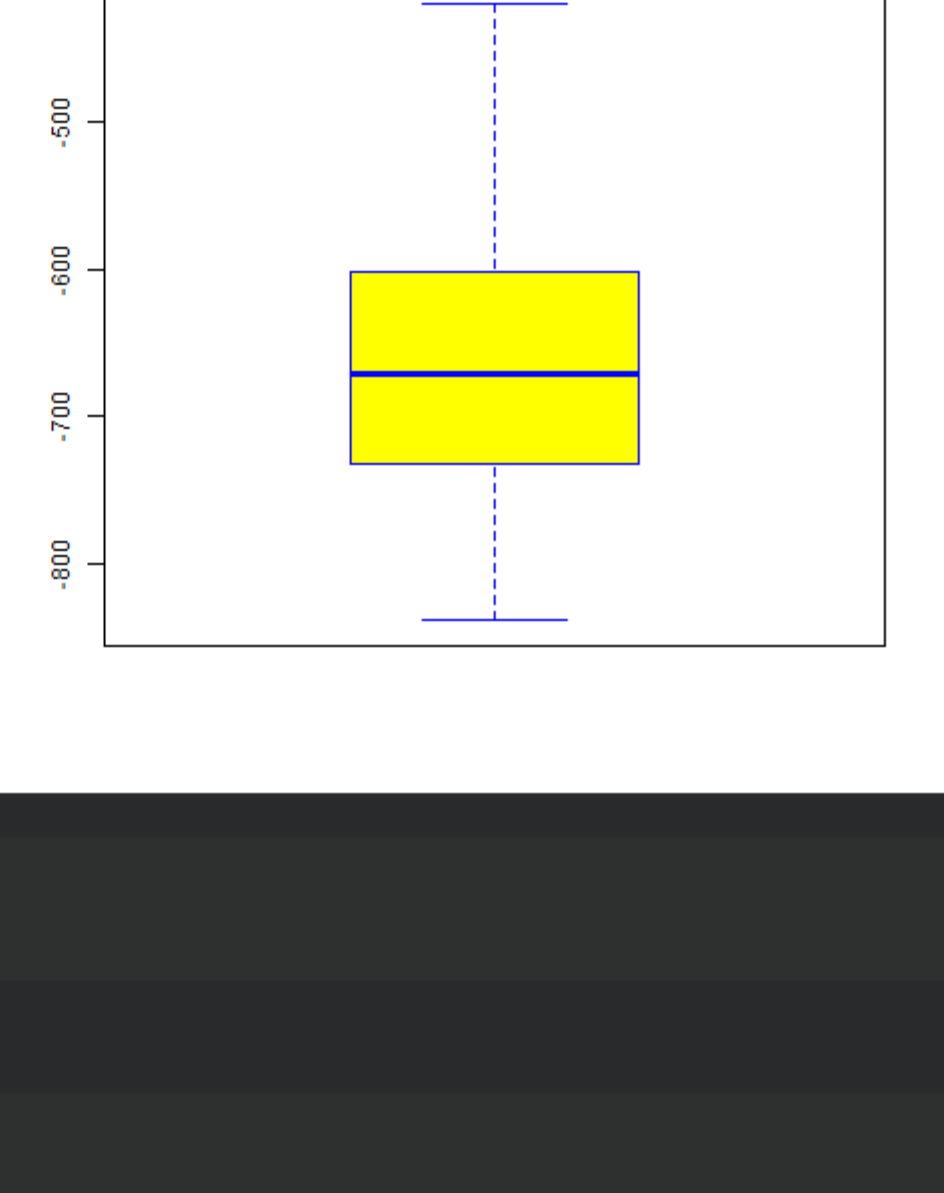
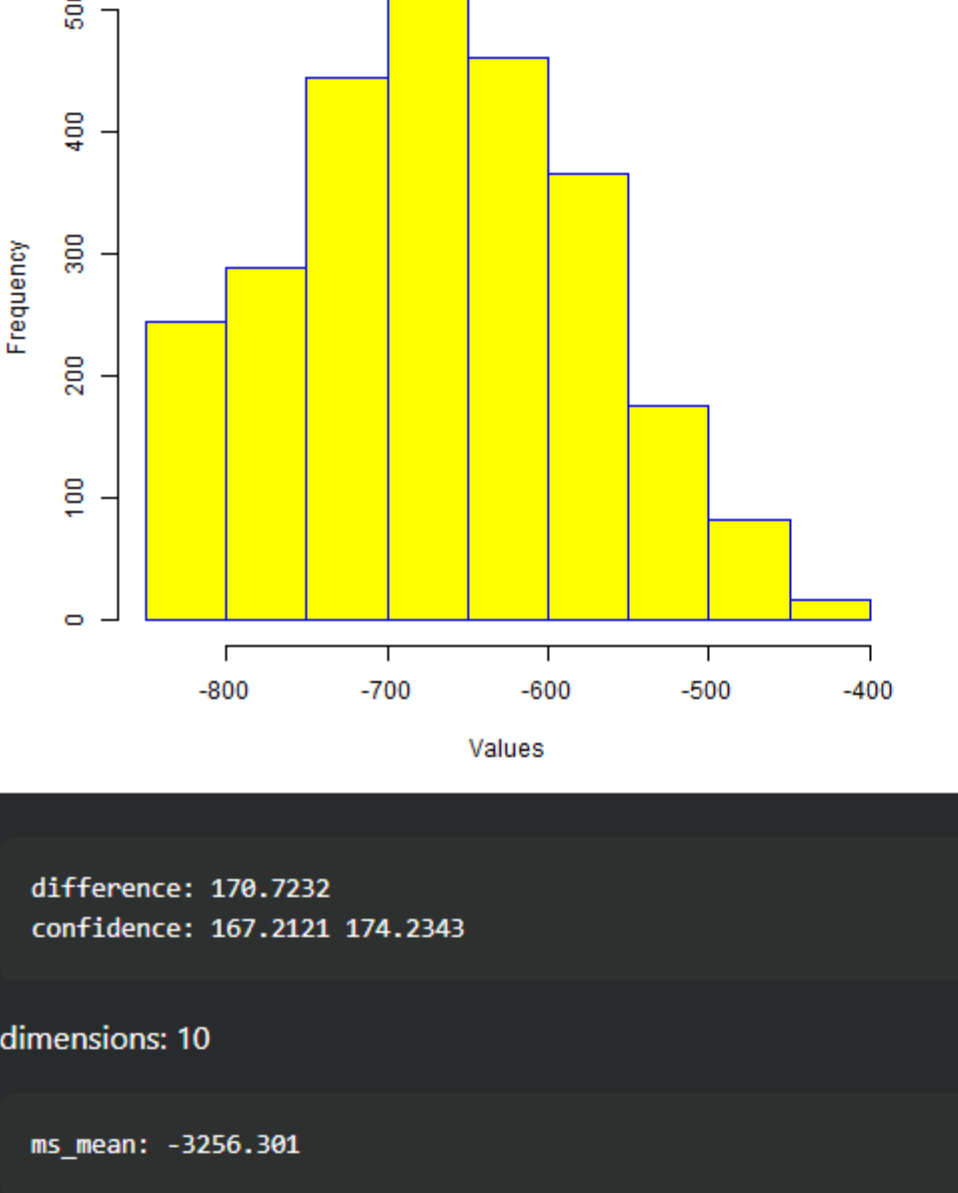


difference: 192.3404
confidence: 189.1007 195.58

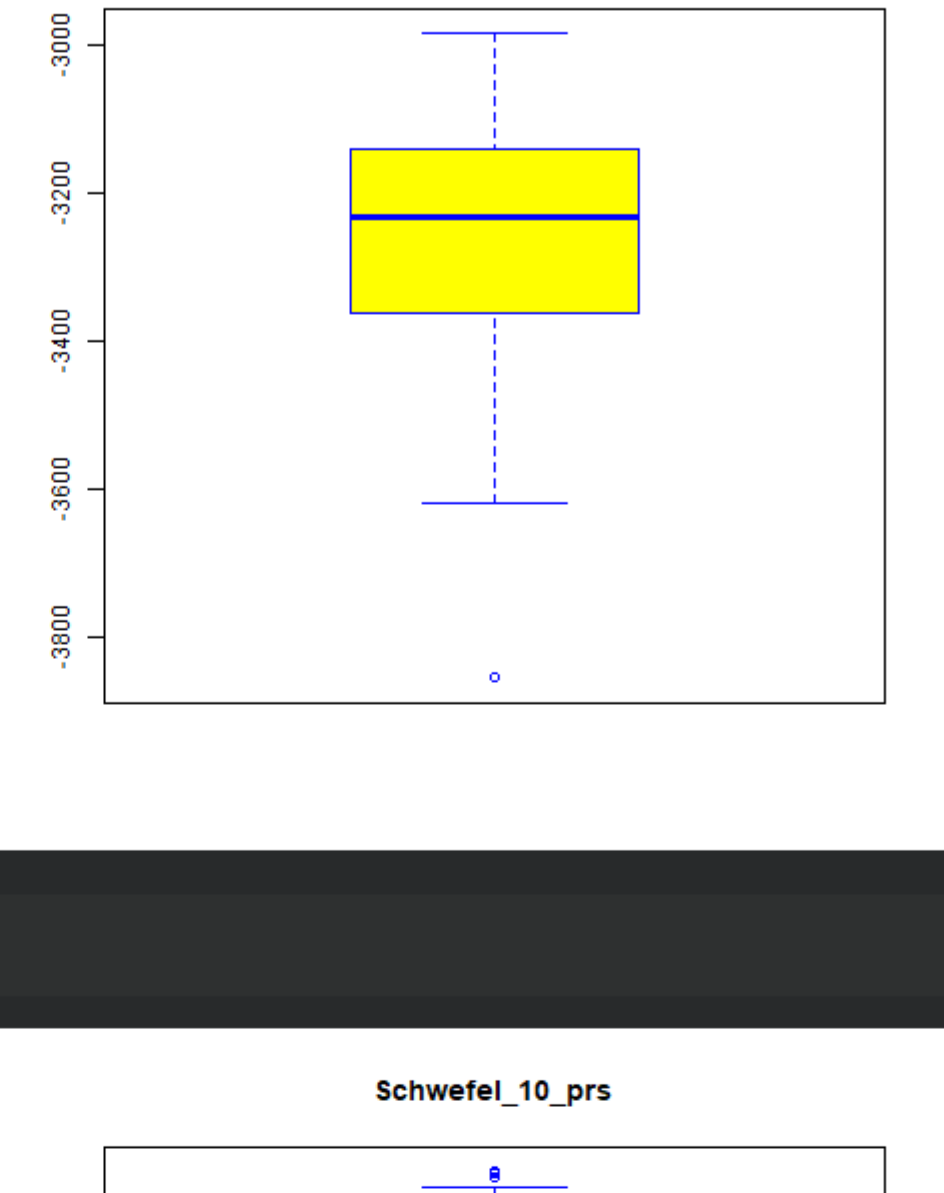
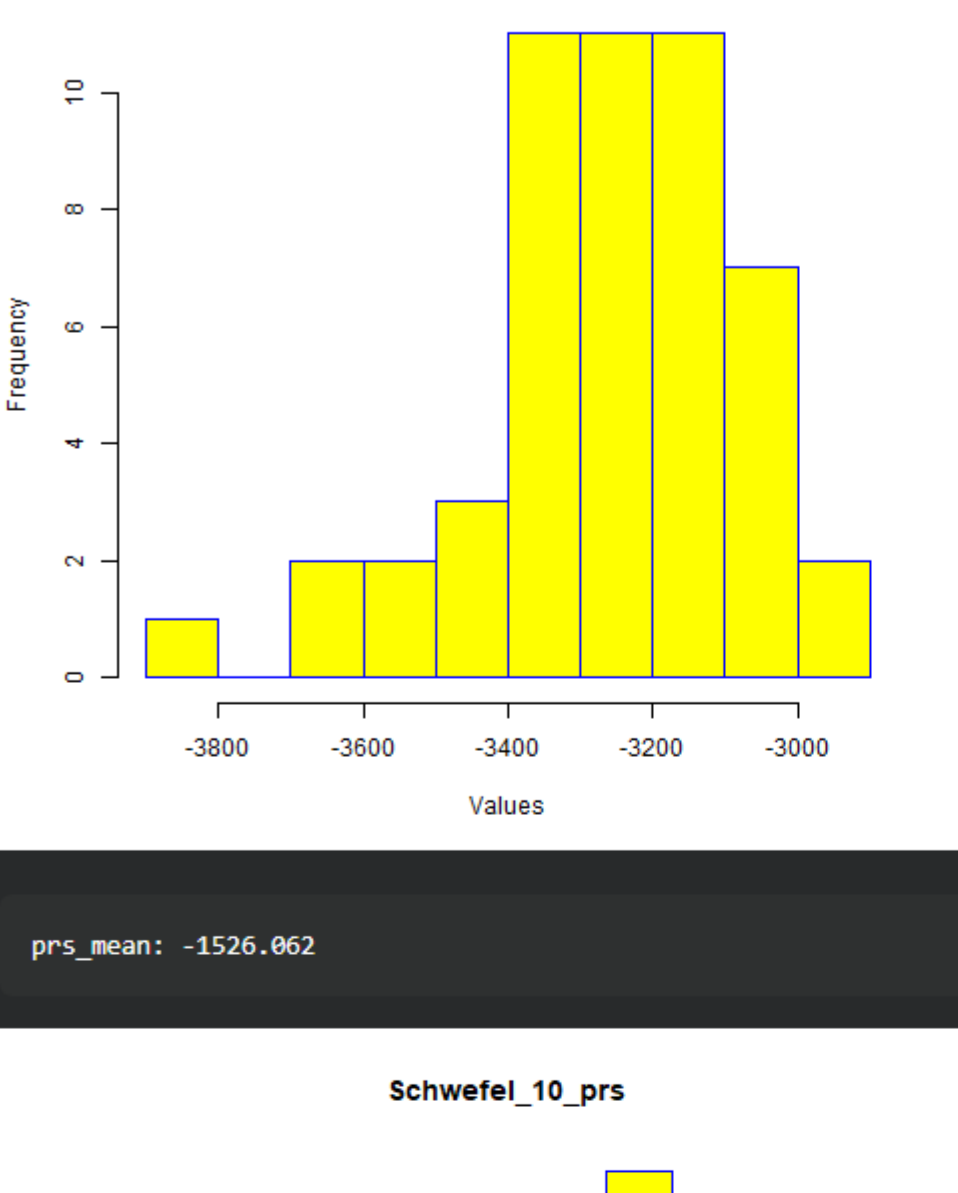
Schwefel funtion:

dimensions: 2

ms_mean: -837.9658



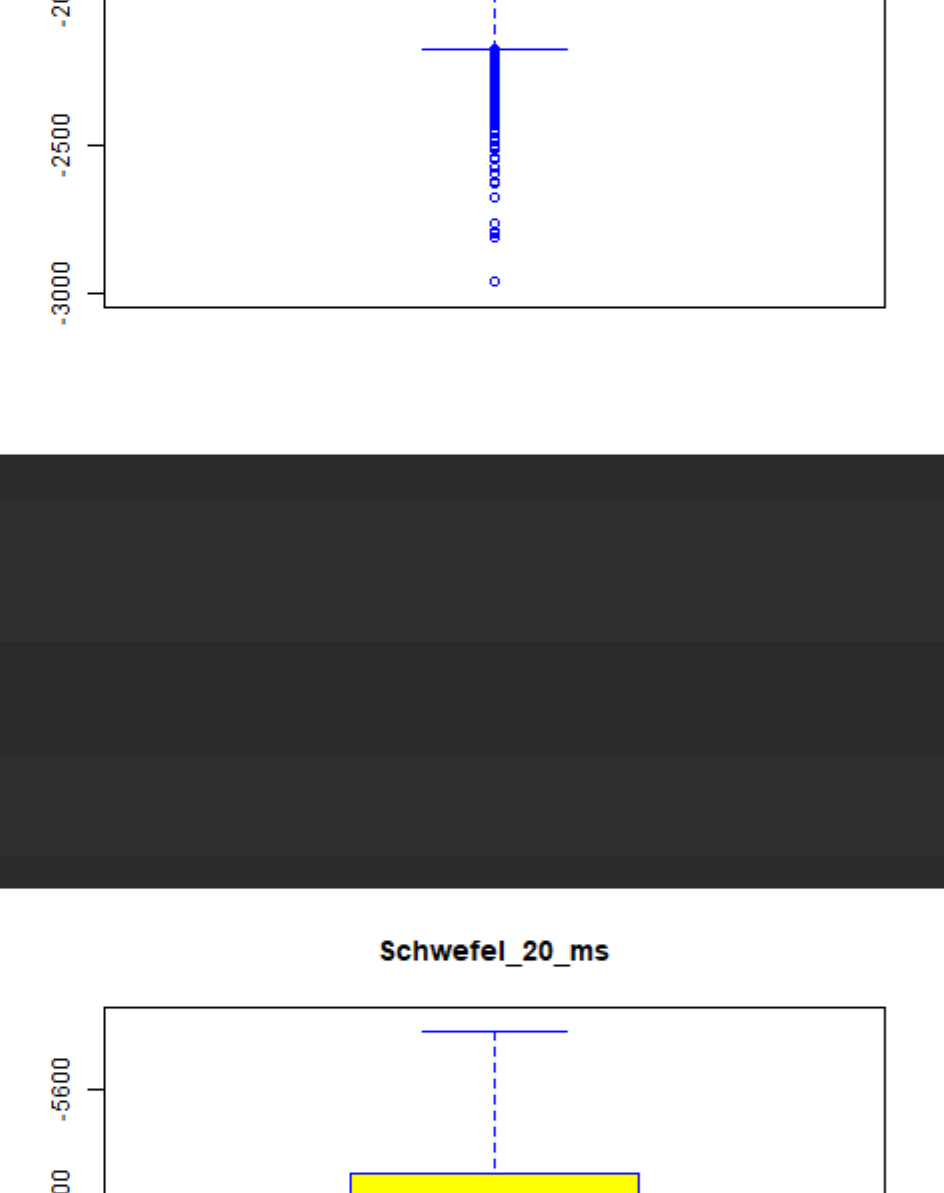
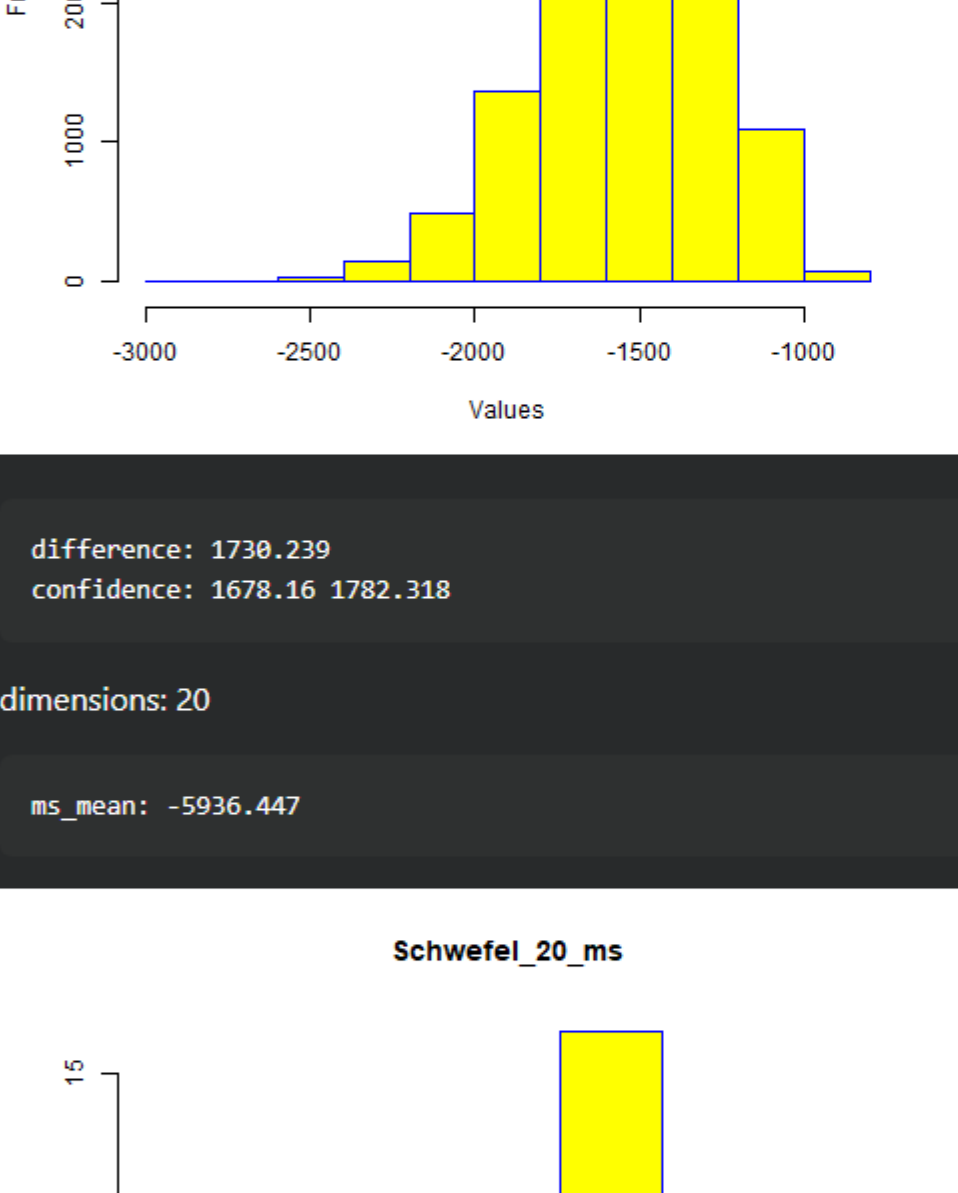
prs_mean: -667.2426



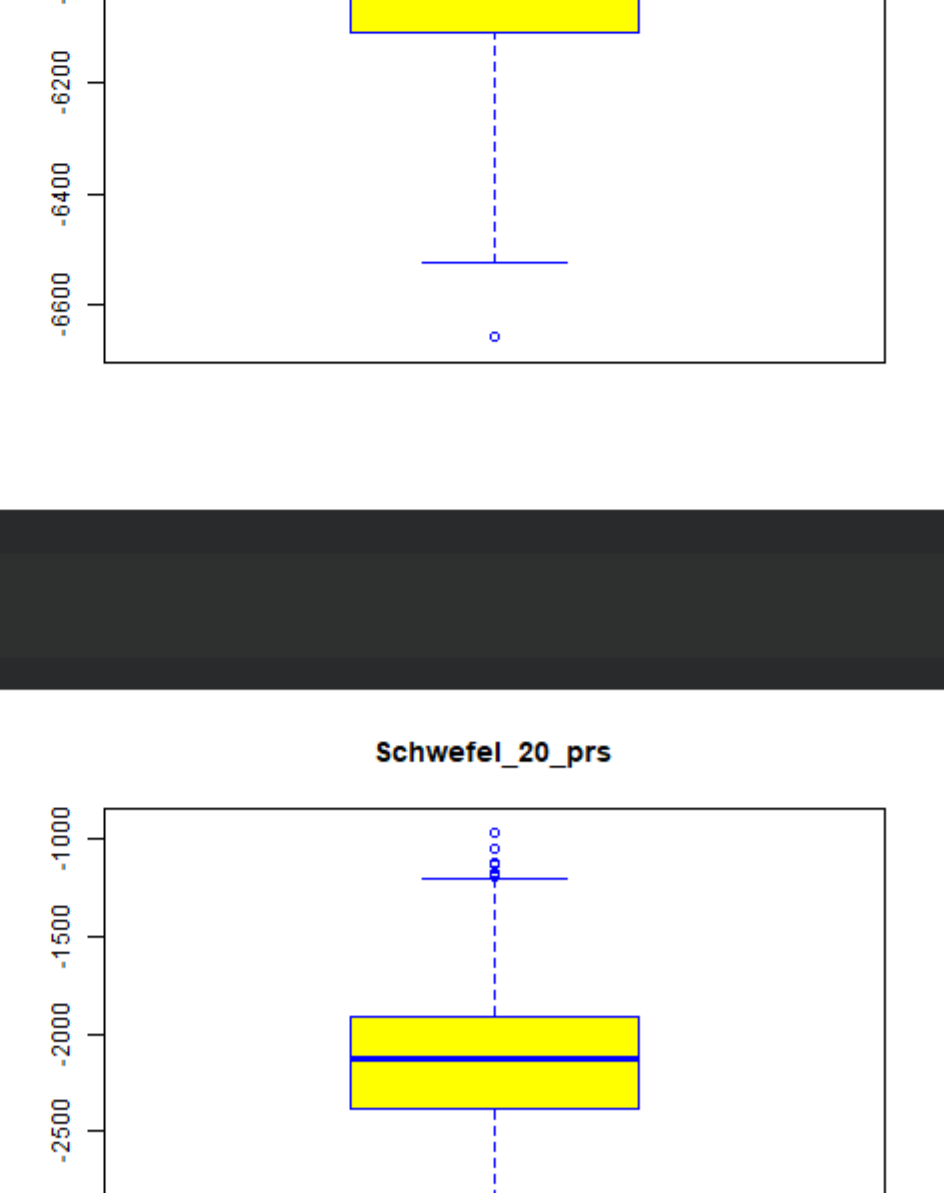
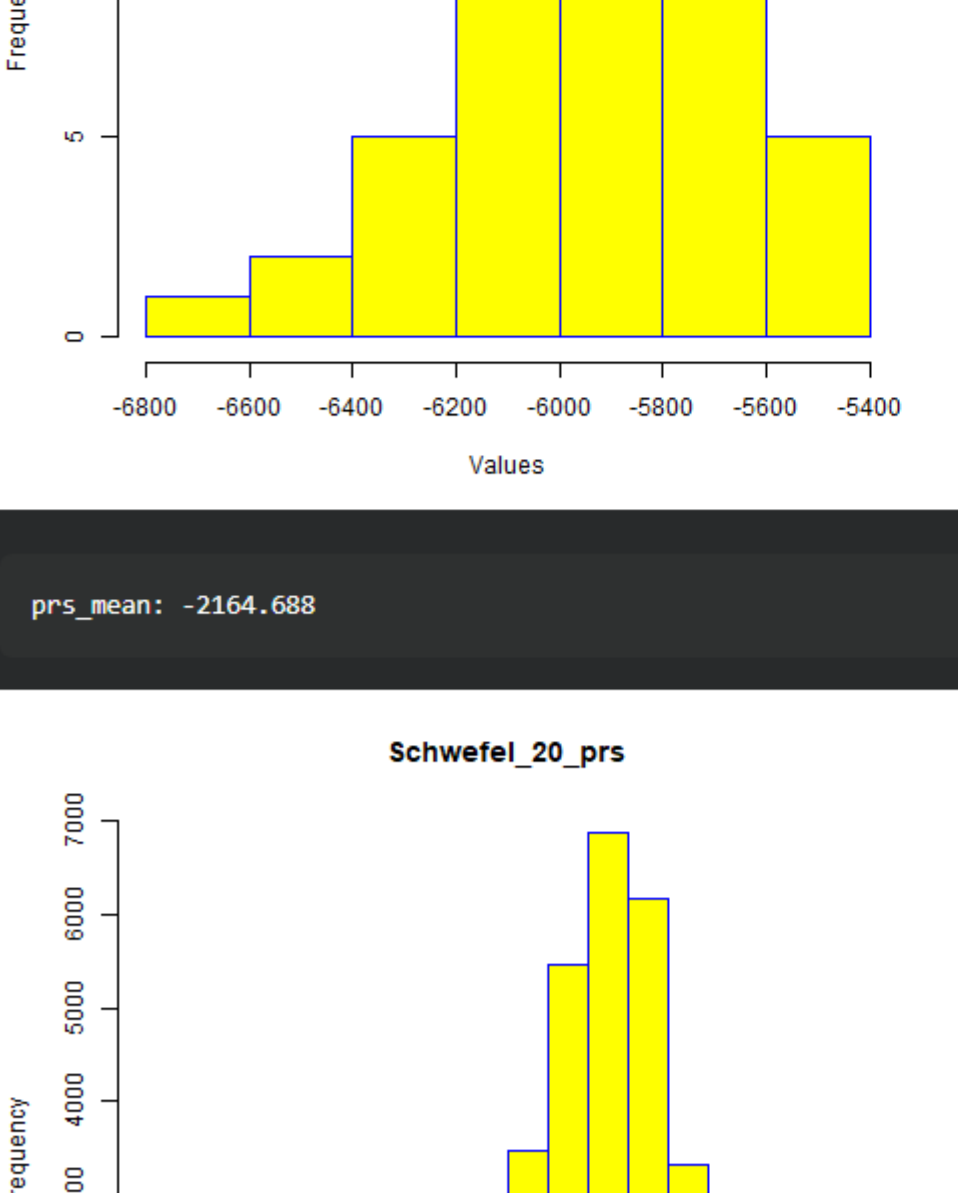
difference: 170.7232
confidence: 167.2121 174.2343

dimensions: 10

ms_mean: -3256.301



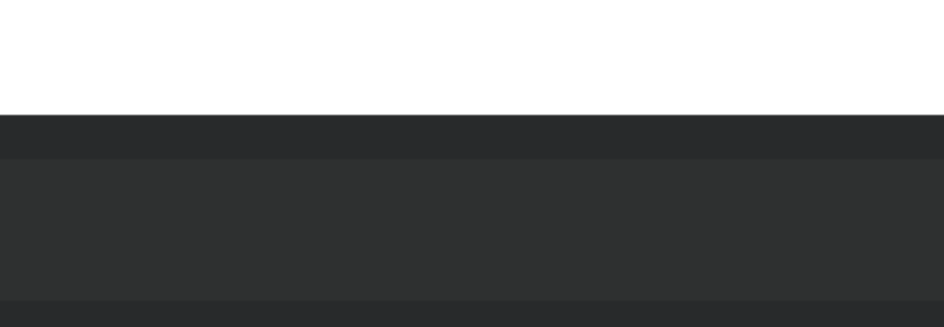
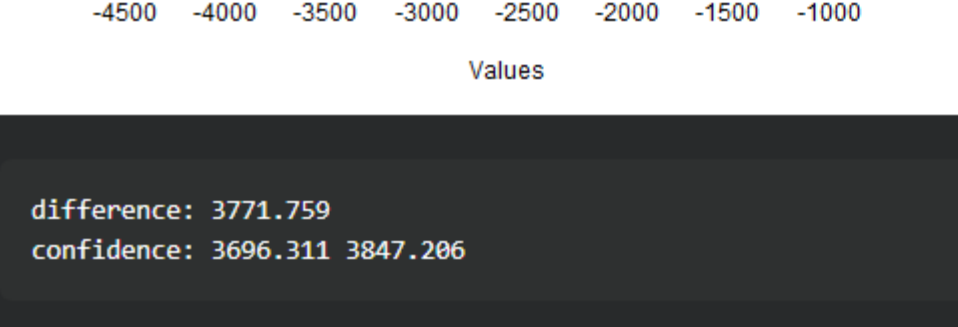
prs_mean: -1526.062



difference: 1730.239
confidence: 1678.16 1782.318

dimensions: 20

ms_mean: -5936.447



prs_mean: -2164.688

difference: 3771.759
confidence: 3696.311 3847.206