Benchmarks

Random Cutting Plane Algorithm

α: Compute an α-optimal solution.

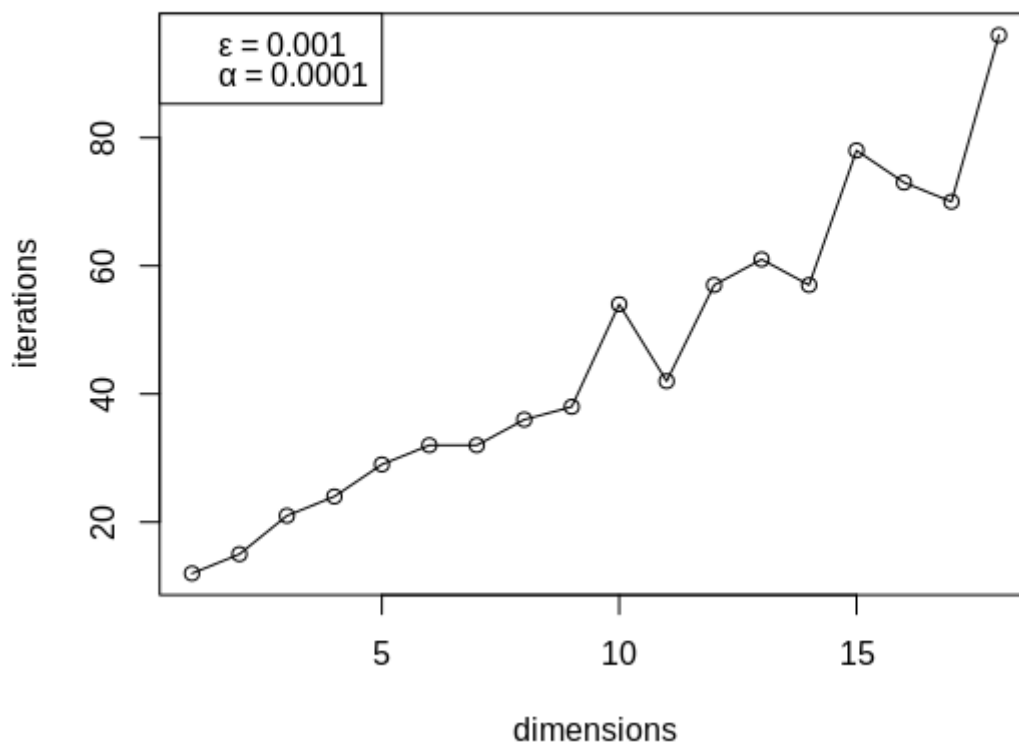ε: probability used to calculate number of samples in the kth iteration: N(ε, k)

Construct a random H-polytope with d-dimensions and 50 facets.

P = GenRandHpoly(d, 50) , d= 2 to 20

1) α, ε default values.

RCP iterations for a random polytope with 50 facets

2) decrease α, ε. We notice that as we decrease α and ε, the number of iterations is increased (as we expected).

RCP iterations for a random polytope with 50 facets