

Exercise 1

(a)

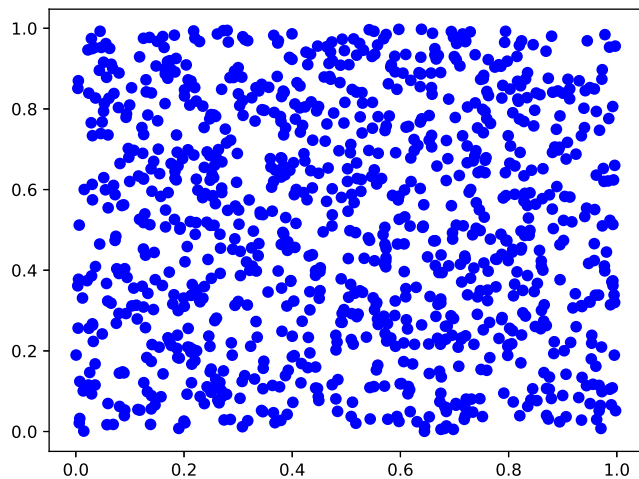


Figure 1: mt19937

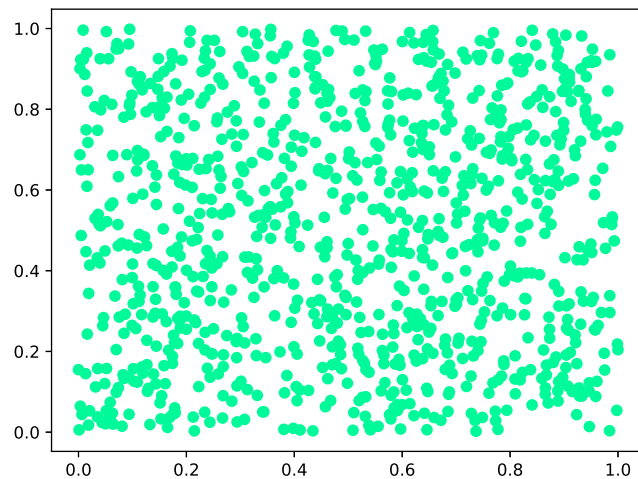


Figure 2: c++ rand()

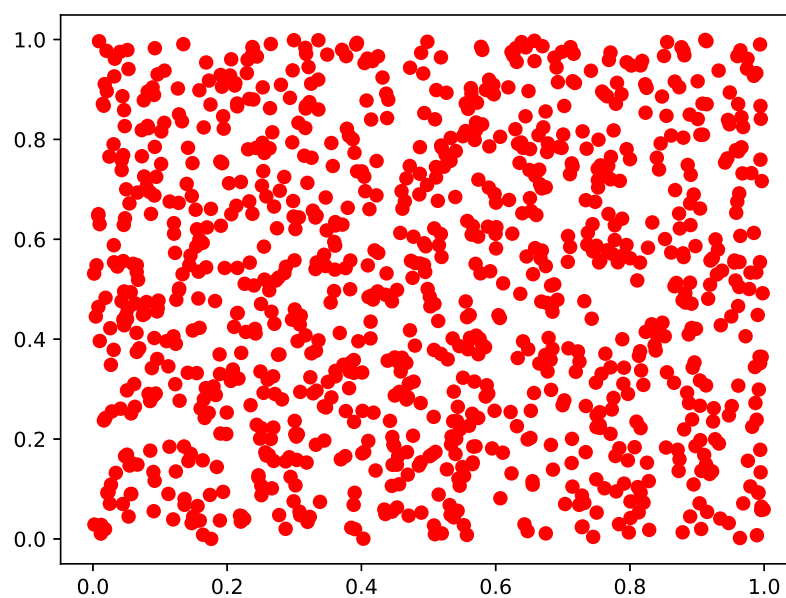


Figure 3: RANDU

(b)

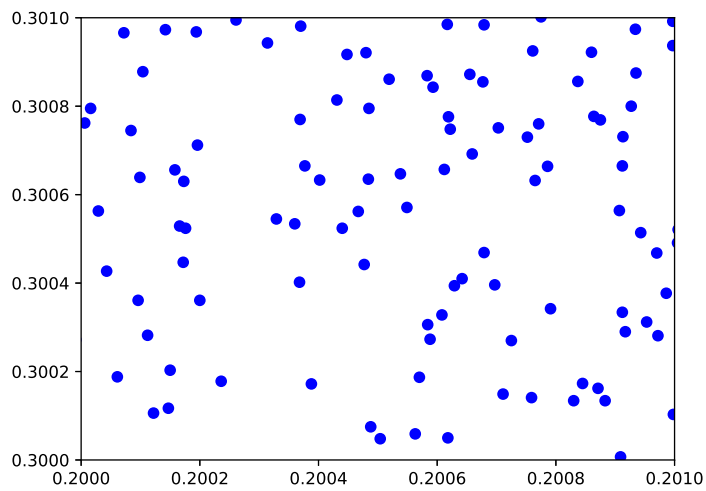


Figure 4: mt19937 zoomed

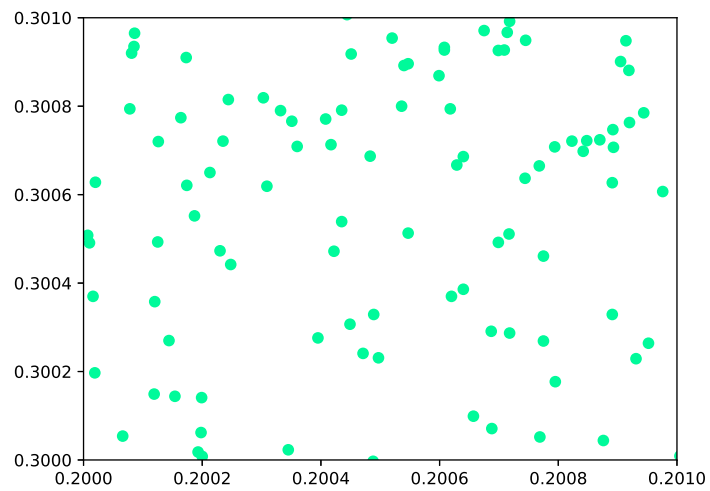


Figure 5: c++ rand() zoomed

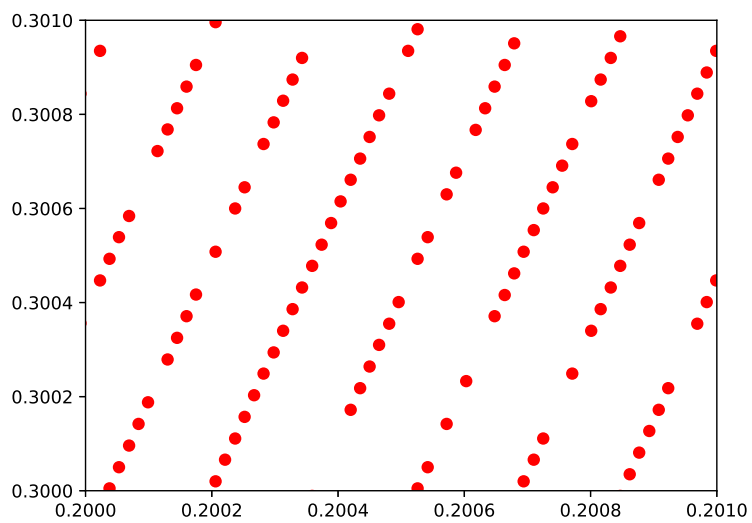


Figure 6: RANDU zoomed

Exercise 2

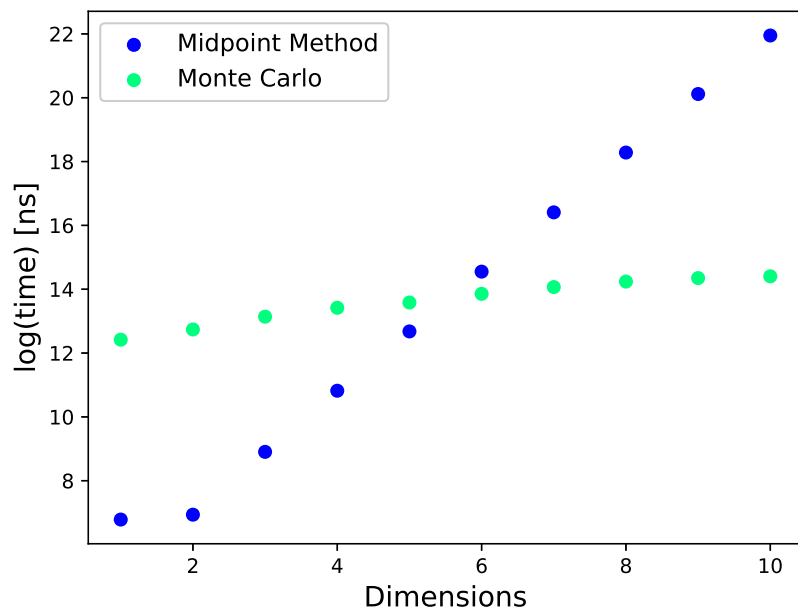


Figure 7: Runtime as a function of the number of dimensions

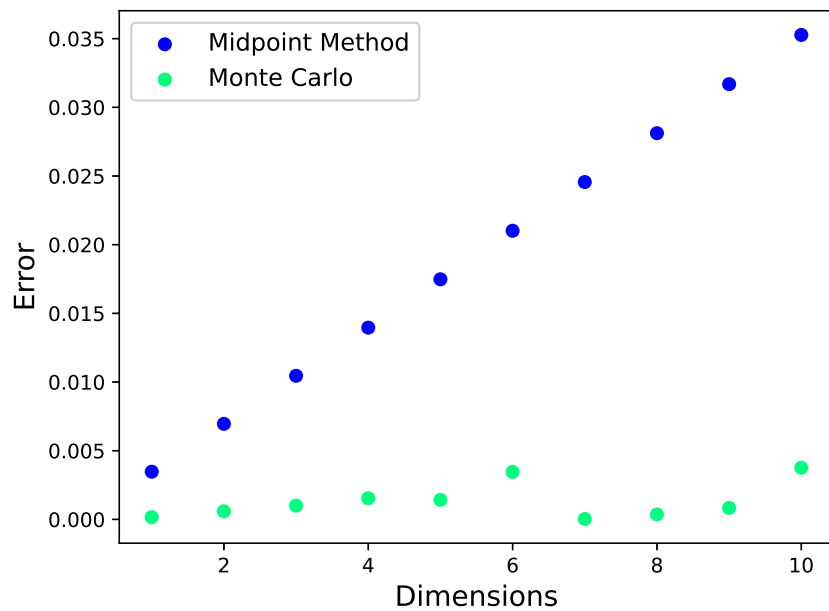


Figure 8: Error as a function of the number of dimensions

Exercise 3

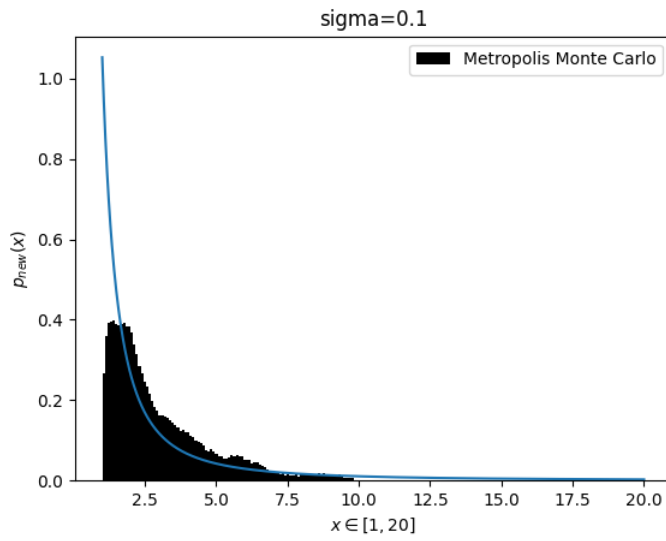


Figure 9: $\sigma = 0.01$

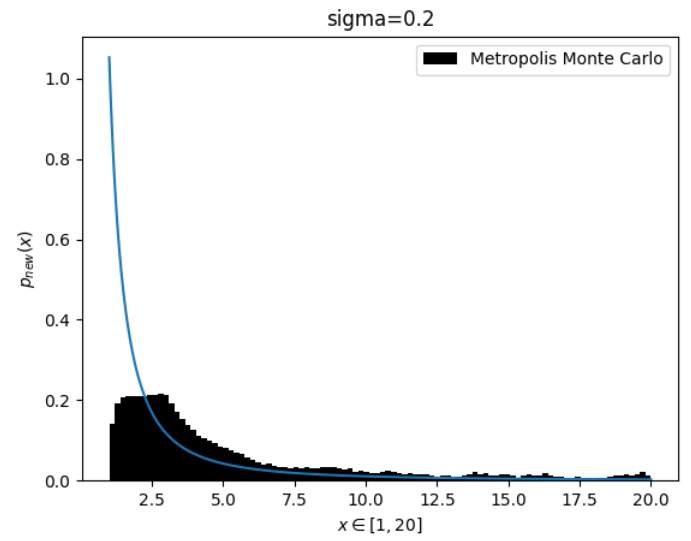


Figure 10: $\sigma = 0.02$

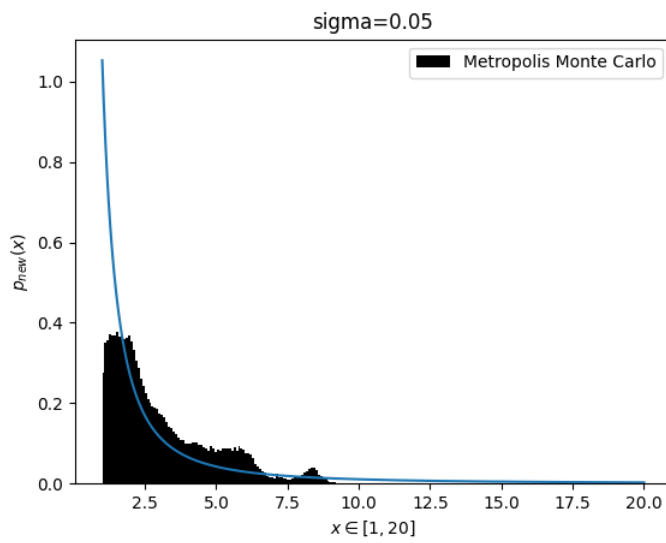


Figure 11: $\sigma = 0.05$

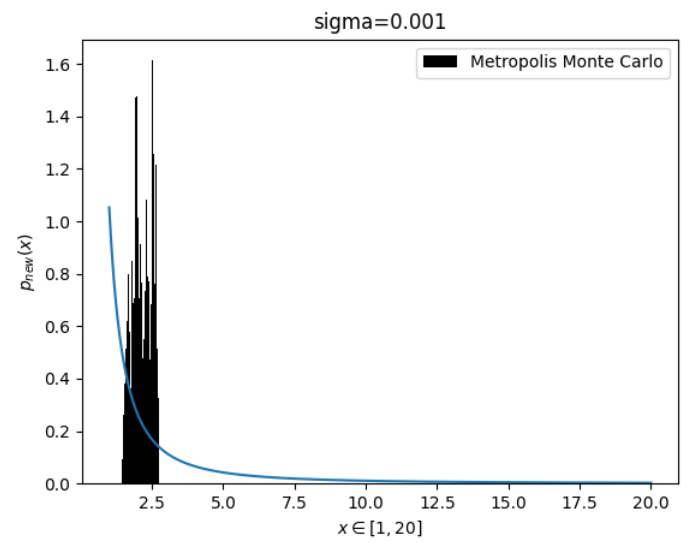


Figure 12: $\sigma = 0.001$