

R:

Fig 1:

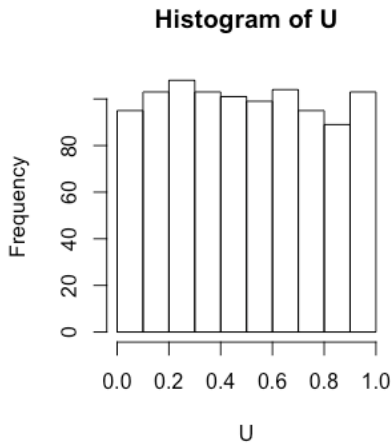


Fig2: Scatter plot of x_{i+1} to x_i

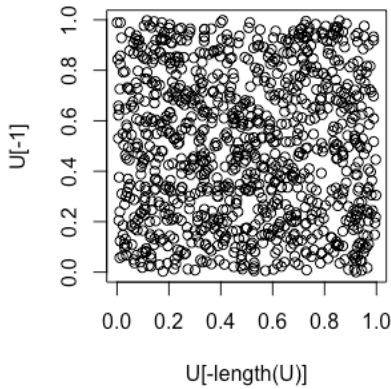


Fig3:

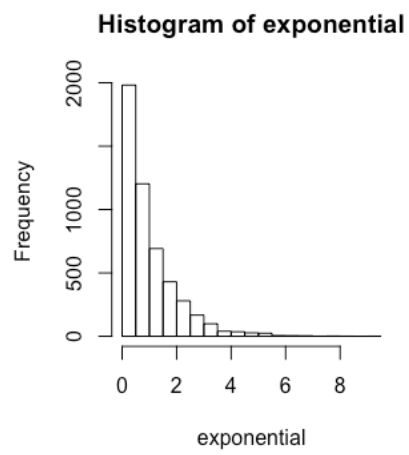


Fig4: Scatter plot of x to y

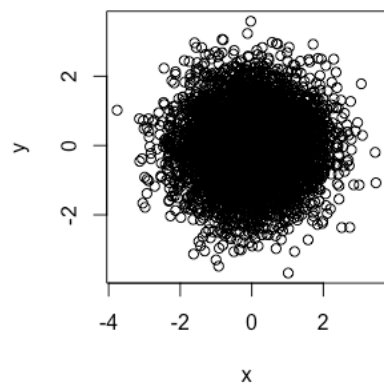
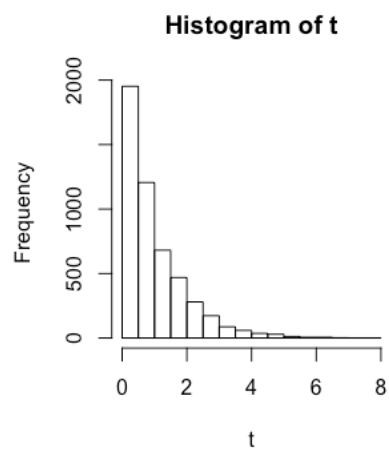


Fig5:



3) Monte carlo:

d=2 3.1264

d=5 5.4784

d=10 2.2528

Python:

Fig1: Histogram of U

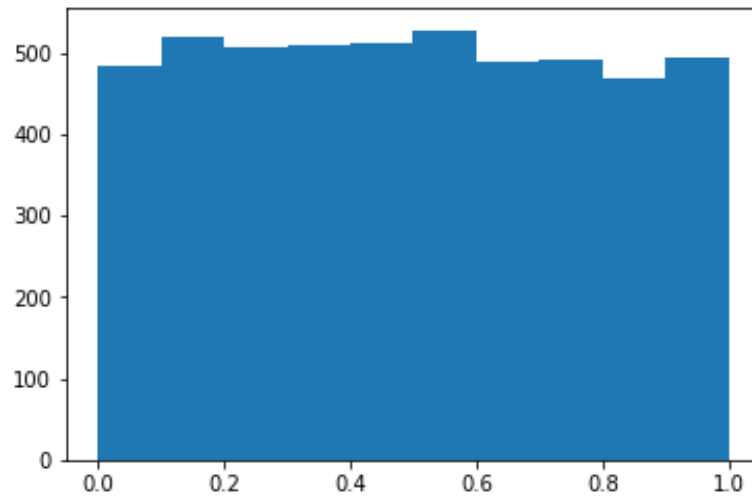


Fig2: Scatter plot of x_{i+1} to x_i

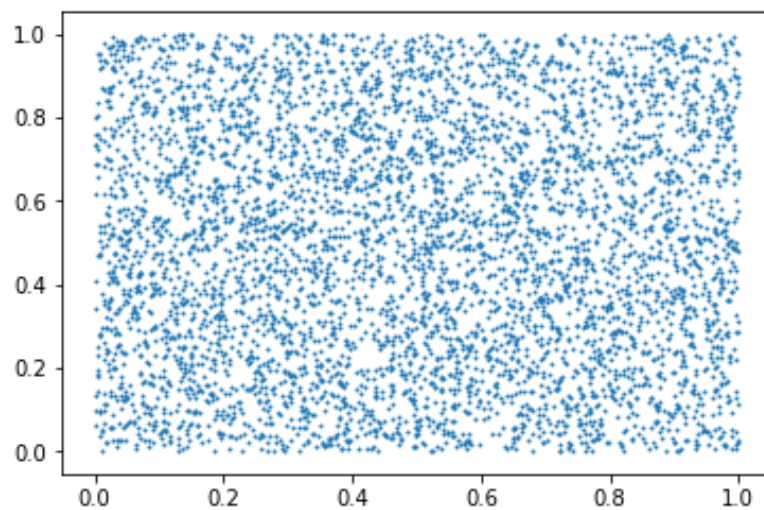


Fig3: Histogram of an exponential random variable

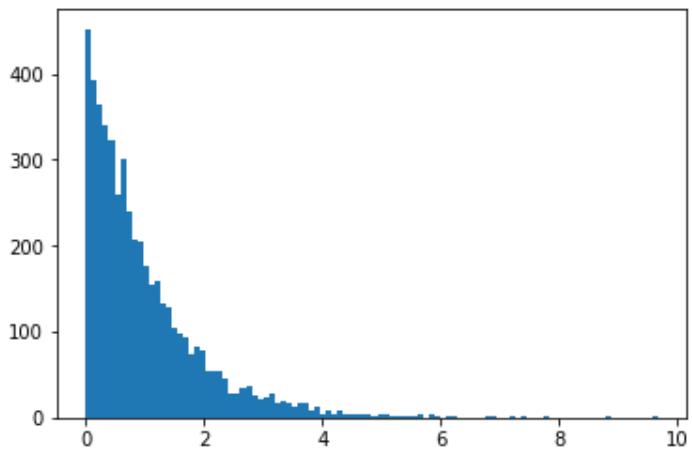


Fig4: scatter plot of x to y

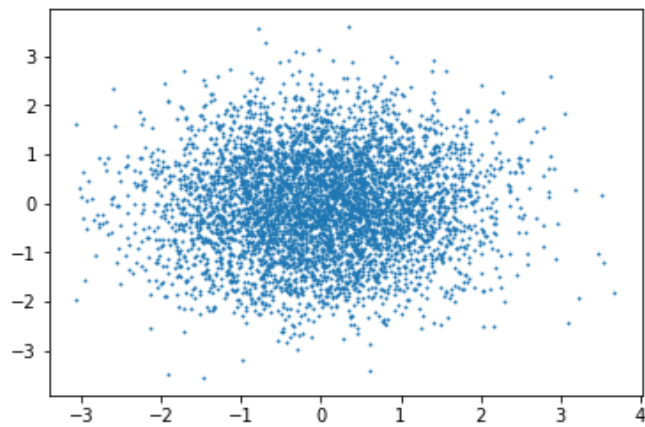
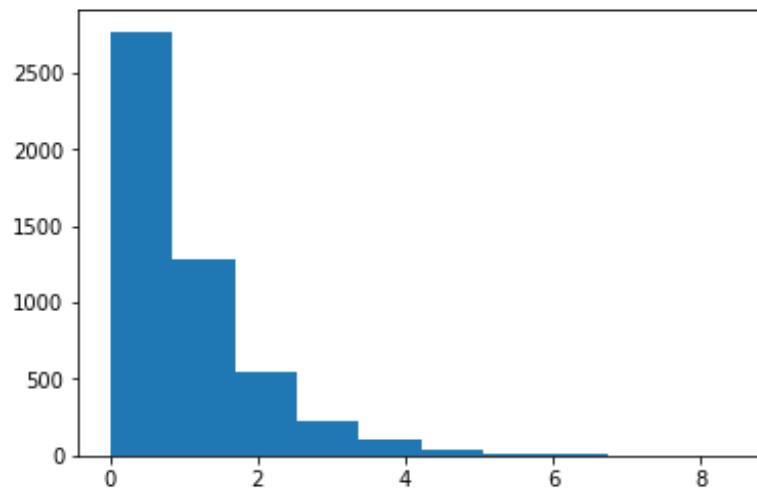


Fig 5: Histogram of T



3) Monte carlo:

D=2: 3.1336

D=5: 5.3824

D=10: 2.2528