Winter school project

1. Solve the exercise problems in the slide (*no presentation).

2. Generate random numbers according to the Levy stable densities and check that they are stable.
   - Case I: the symmetric Levy $L_{3/2,0}(x)$
   - Case II: the one-sided Levy $L_{1/2,1}(t)$

3. Consider a subdiffusive CTRW process with $\boldsymbol{\alpha}$=1/2 and confined in a harmonic potential. This is the fractional harmonically trapped particle. Simulate this process and plot together the following MSDs vs time.

ensemble-averaged MSD $\langle x^2(t) \rangle$

time-averaged MSD $\langle \overline{\delta^2(\Delta)} \rangle$