



Figure 1: A schematic diagram of a 1D chain of  $N$  particles. The chain is represented by a horizontal line with  $N$  particles, each shown as a circle with a dot in the center. The particles are labeled  $1, 2, 3, \dots, N$  from left to right. The distance between adjacent particles is labeled  $a$ . The total length of the chain is labeled  $L$ . The chain is connected to a wall on the left by a spring with spring constant  $k$ . The wall is represented by a vertical line on the left. The displacement of the chain from the wall is labeled  $x$ .

*Please print or type all information, except signatures.*

Medway

Beginning: 03/29/2022

(MM/DD/YYYY)

☐ 20th day of January (Year-End report)

2. I certify that I have not received any contributions, made any expenditures, or incurred any obligations during this reporting period, and do not have a campaign fund in existence.
3. I certify that I do not have a political committee.

[illegible]