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Questions:

1. The Kinetic Energy grows linearly with the N particles. This can be seen in the first graph, it increases linearly in a straight line, there is an increase in an equal amount for the kinetic energy with each particle.
2. The potential energy grows exponentially with N particles. Potential energy grows with square of the N particles.
3. When time required to compute Kinetic energy is plotted against N particles, the kinetic energy is seen to scale linearly. This is because the time required to compute kinetic energy increases sequentially as the N particles is increase. On the other hand, when time required to compute potential energy is plotted against N particles, the potential energy is seen to scale quadratically. This is because potential energy grows with the square of the partices.