Instructor's guide This follows Equipartition theorem

If the microscopic world was classical, predict $U_{\text{classical}}(T)$ for the following "toy molecules" in the gas phase.

(a) Missing /var/www/paradigms_media_2/media/activity_media/one-spring.png (b) Missing /var/www/paradigms_media_2/media/activity_media/one-rod.png (c) Missing /var/www/paradigms_media_2/media/activity_media/three-springs.png (d) Missing /var/www/paradigms_media_2/media/activity_media/four-rods.png

- Each ball is a point mass m with no moment of inertia.
- The zig-zag lines are springs which are freely jointed at the balls.
- Vibrational motion of the springs is very small ($\ll$ the length of the spring).
- The springs can extend and compress, but cannot twist or flex.
- The straight lines are rigid rods.