Assignment 4

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1. A system of two masses connected by two light springs of force constants $k_1$ and $k_2$. The masses are $m_1$ and $m_2$, and the positions are $x_1$ and $x_2$.

2. A diagram shows the force exerted by a spring as a function of displacement. The force constant is $k = 5$ N/m. Draw the force-displacement graph.

3. A pendulum is oscillating with a period $T$. The length of the pendulum is $L$.

4. A block of mass $m$ is sliding on a frictionless surface. An applied force $F$ acts on the block. The block moves with acceleration $a$.

5. A simple harmonic oscillator has a spring constant $k$. The mass attached to the spring is $m$. The system is oscillating with a frequency $f$.

Unit 6 - Week 4