

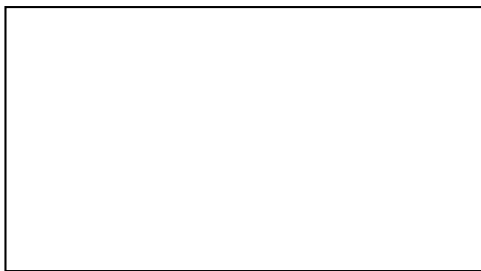
Name: _____ Date: _____ Period: _____

Notes: Changing from Kinetic to Potential Energy with a Pendulum.

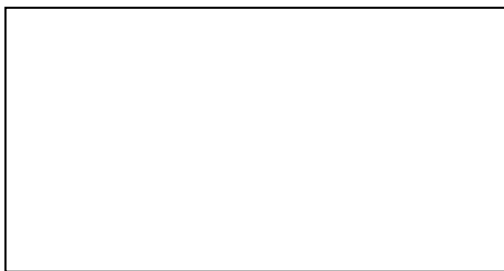
1. Draw the pendulum at **rest**. What kind of energy does it have here? _____



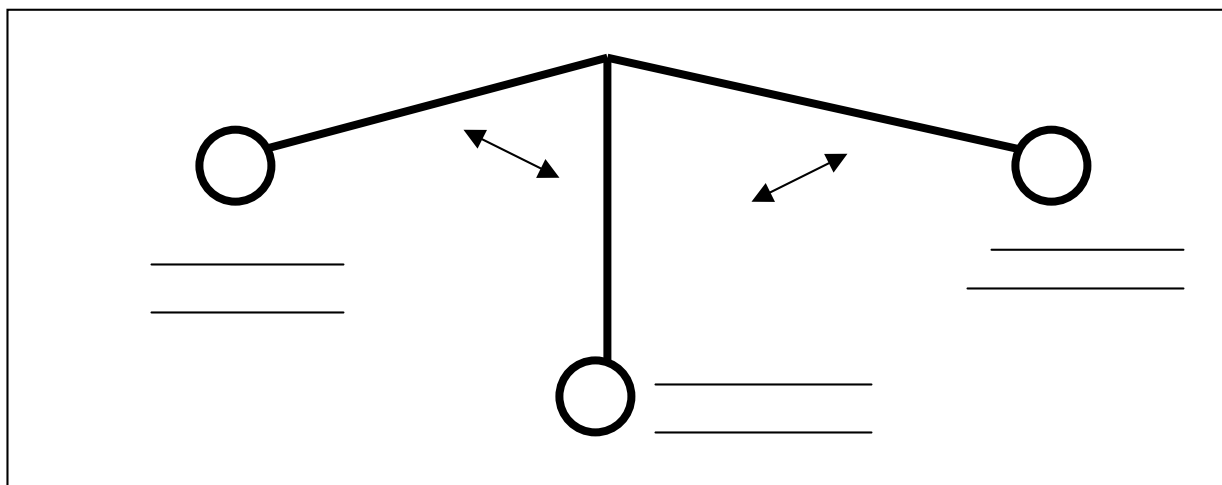
2. Draw a picture showing **increased** energy from picture 1.



3. Draw the pendulum **swinging**. What type of energy does it have here? _____



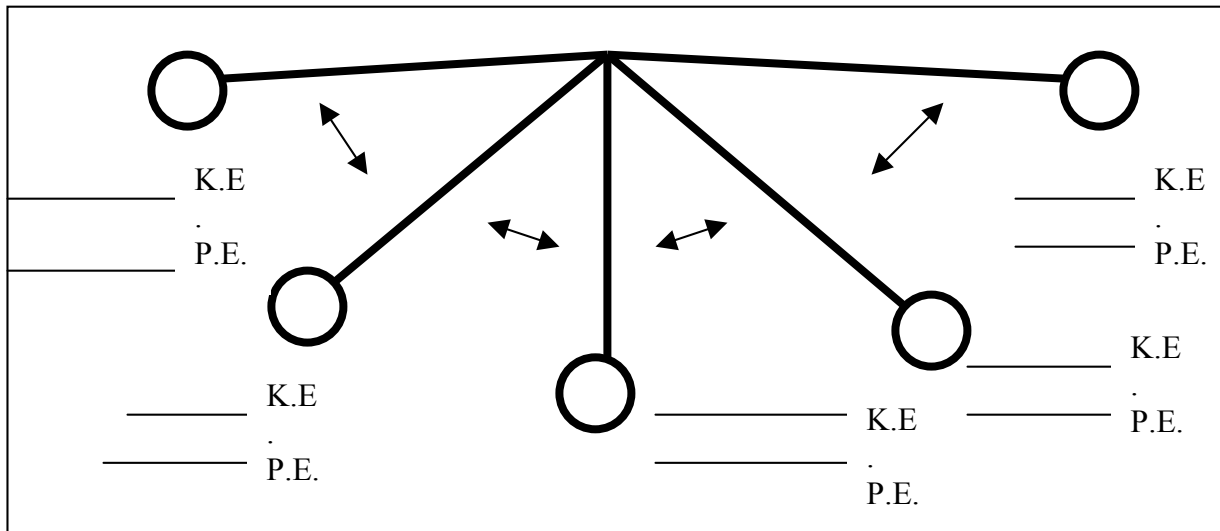
4. Label the picture with the following terms:
Maximum P.E., Minimum P.E., Maximum K.E., Minimum K.E.



The Law of Conservation of Energy: Energy _____ be created or destroyed.

Potential Energy gets t_____ into _____ energy when the pendulum is dropped. If you start with 50 joules of potential energy, at the bottom of the swing you will have _____ joules of _____ Energy. Some energy is “LOST”, it is usually lost in the form of _____.

Practice: *The Ball starts out with 60 joules of Maximum Potential Energy. Assume **NO** energy is lost during the energy transfers.*



The sum (+) of Potential Energy and Kinetic Energy is _____

Calculate Kinetic and Potential Energy:

Formula for K.E. = $\frac{\text{Mass} * (\text{Speed/Velocity})^2}{2}$

Formula for G.P.E. = $\text{Mass} * 9.8 * \text{height}$

Show Your Work!

Kinetic Energy	G.P.E.
1. Mass = 2 kg, Speed = 1 m/s	2. Mass = 2 kg, height= 3 m
3. Mass = 4 kg, Speed= 2 m/s	4. Mass = 3 kg, height = 2 m
5. Mass = 1 kg, Speed = 1 m/s	6. Mass = 1 kg, height = 1 m

Check Your answers with the teacher to see if you are correct! Teacher Initial: