**Part 1: Practicing Metric Conversions**

Use the staircase method. Convert each measurement below to the unit listed.

1. 3g=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_milligrams
2. 4421mL=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_dkL
3. 3.66m=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cm
4. 370 dm=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dkm
5. .02 cg=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dg
6. 5L = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hL

**Part 2: Calculating Gravitational Potential Energy**

Use the formula for calculating Gravitational Potential Energy to solve the problems below. Remember to use the appropriate metric units and show your work.

Reminders:

PEgrav=mgh

* *m* stands for mass which must be measured in kilograms!
* *g* stands for acceleration due to gravity which is always the same on earth. Write the rate in the space below.

*Acceleration due to Gravity on Earth: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

* *h* stands for height which must be measured in meters!

A wrecking ball hanging from a crane has a mass of 450 kg and is 27.4m high. How much Gravitational Potential Energy does the wrecking ball have?



At the grocery store, Veronica bought 4 apples which had a mass of 253.6g. When she got home, she put them in her fruit basket which is 2.13 m above the ground. How much Gravitational Potential Energy do the apples have?



During one of your lab trials, held a ping pong ball at a height of 50cm. The ball had a mass of 26.4g. How much gravitational potential energy did the ball have during this trial?