

With the aid of a protractor determine the initial angle of the pendulum with the balloon of Mountain Dew

Estimate the radius of the balloon.

Assuming the density of mountain dew is 1000 kg/m3 determine the mass of the balloon. ( Vsphere = $\frac{4}{3}πr^{3}$ )

Estimate the length of the pendulum.

Determine the vertical drop of the pendulum with the aid of a diagram

Use conservation of energy to determine

1. the kinetic energy of the balloon at its lowest point.
2. the speed of the balloon at its lowest point.