

## 1 Lab - Simple Harmonic Motion

1. Make a pendulum and measure its period. Measure the period by measuring ten full cycles (to reduce error) of the mass at the end and divide by ten.

- $l = .5m$ 
  - $10^\circ$

–  $20^\circ$

- $l = 1m$ 
  - $10^\circ$

–  $20^\circ$

- $l = 1.5m$

– 10°

– 20°

2. Measure the period of a spring. Have a spring hang, and measure the period for different displacements.

- What is the amplitude? What is the period?
  
  
  
  
  
  
  
  
  
  
- Try a new amplitude. What is this amplitude? What is the period?