Name _____   Date _____

Partners: Due Date: _____

Bouncing Ball

NO Lab Write-Up Required

Procedure:

- Hold a ball at shoulder height. Measure and record this height to the nearest whole centimeter.
- Drop the ball. Measure and record the height that the ball bounces back to. Estimate to the nearest whole centimeter.
- Measure and record the mass of the ball.
- Repeat for two more trials.

Data Collection: (10 pts)

Trial	± _____	± _____	± _____	± _____	± _____	± _____
1						
2						
3						
average						

Data Processing: Answer all questions below using the GUESS method and appropriate significant figures. Use complete sentences where appropriate.

1. Calculate the average gravitational potential energy that the ball possessed right before it was dropped.   (5 pts)

2. Calculate the average gravitational potential energy that the ball possessed when it rebounded to its highest point.   (5 pts)

3. How can you tell that the ball "lost" some of its initial energy when it bounced?   (1 pt)

4. Is this energy really lost? Explain.   (2 pts)

5. Calculate the amount of energy "lost."   (2 pts)

6. Calculate the average speed of the ball when it hit the floor.   (5 pts)

7. Calculate the average speed of the ball when it rebounded off the floor.   (5 pts)