

Name:

Student ID:

Physics 9HA DL #17 Lab Report

Answer all the questions below, and include explanations or calculations based on the data to backup your answers in each case.

I. Direct Measurement

1. Use the data to compute the moment of inertia of the ring.

2. Compute an estimate for the percentage uncertainty of the moment of inertia and record it below:

direct measurement: $I_{ring} = \text{_____} \pm \text{_____} \%$

II. Experiment

3. Use the data to determine the acceleration of the hanging weight.
 - a. Part 1 (ring on cradle)

 - b. Part 2 (cradle only)

4. Compute the moment of inertia of the ring. Explain how the two parts of the experiment play a role in this calculation.

5. Compute an estimate for the "weakest link" percentage uncertainty of the moment of inertia.

experiment: $I_{ring} = \text{_____} \pm \text{_____} \%$

III. Confirmation of Results

6. Compare the results, and determine whether they are in agreement to within uncertainties.