Experimental "g" Lab

I. PURPOSE

To determine the value of "g" experimentally, and see the effect of the shape and weight of an object has on free fall.

II. MATERIALS

III. PROCEDURE:

IV. DATA

Distance dropped: _____

Time of Drops

V. PROCESSING THE DATA

Average time = Sum of all the times you took = # of drops

Free Fall distance equation → $d = \frac{1}{2}gt^2$

Free Fall distance equation when solved for "g" → g (exp.) =

Experimental g = _____

Percentage Error

$$PE = \frac{\text{Experimental g - Actual g}}{\text{Actual g}} \times 100$$

PE=

VI. CONCLUSION

VII. DISCUSSION (Answer the following questions in 2 paragraphs – eight sentences for each paragraph).

1. Why was your value off by the above amount and what caused the error? Explain (please consider all possible reasons – there are a lot of factors here).

2. Was the object used in the lab appropriate for achieving the purpose? Why or why not?

3. How could you make your value for "g" more accurate? Explain (again, lots to consider).

4. Did you like the lab? Explain.