[Lab 1] Uniformly ○○○○ Motion

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* Following example is a basic format; however, you may add any comment as you wish. The typical length should be about one page with single space.

Introduction

We carried out the lab, uniformly ○○○○ motion, with the objective to gain a better understanding of how the relationship between position, velocity and acceleration work. (Then, you may put here some of knowledge on this subject.) The basic equation to start with is as follows:

$$\Delta x = v_0 t + \frac{1}{2} a t^2$$

(Explain the variables and meaning of the equation.) The main piece of equipment in this experiment is ○○, ○○, and ○○. The first device is to measure ○○, the second one is to compare with ○○, and the third one is used for ○○. (Also describe the procedure in a couple of sentences in your own words.) The entire lab is to confirm the above theory with the described experimentation by obtaining the time interval and displacement of the motion.

Conclusions / Discussion

Our experimental results indicate that the theoretical expectation has been proved within a margin of errors, as the standard deviation of ○.○○ %. Therefore, we can conclude that our experiment was successful although the device was fairly sensitive to manipulate. For example, the errors likely came from the randomness of locating the initial position. This may have induced the finite initial velocity which was supposed to be zero. (← If the results are not good, you can state as, "The error indicates that our experiment was not so successful. The reasons are following: … {Here, you will write the significant causes of errors.} However, you do not write merely human errors. State them more analytically with some of your observation.) From our results, I found a tendency that ○○ is proportional to ○○. The lab was well structured and informative. It was eye opening to see all the ○○ to learn ○○ is ○○. It makes much more sense to me now than it did during the lecture. (← You can comment as above, but note that these types of comments are not suitable for a journal manuscript.) The theory depicted in this lab can be applied to do ○○○○ in my study field.

Data Sheet

See Attached. (Attach the data sheet you filled out during the lab time. The sheet must have instructor's signature.)

Questions to ponder

(Answer the questions based on your experimental results and theoretical prediction. If your result is different from the prediction, discuss it with a convincing reason.)