

Instructions for SHM Lab Report

Title: Give a descriptive title.

Abstract: As usual. Make sure to include the final value of g that you found.

Introduction: Just give an introduction to the experiment, no need to get deep into the theory, you can fill this section with an outline of the report if you wish.

Theory: Write up the derivations associated with the spring that you performed in the worksheets in the lab manual. Then just give the final formula for the time period of the pendulum and mention that you can derive it by considering small oscillations of a simple pendulum.

Procedure: Just like before. Keep it short and simple.

Results: What were the spring constants that you measured for all three springs? What was the combined spring constant of the two springs in the parallel and series configuration? (Check if for the parallel combination, the combined spring constant is $k_1 + k_2$, and for the series combination, is it $(1/k_1 + 1/k_2)^{-1}$?)

Give your results for the value of g that you obtained, along with the standard deviation.

Conclusion: Did your theoretical predictions match your experimental values for the series and parallel spring combinations? Is the pendulum method a good one for measuring g ? What are some possible sources of error?

No need for a diagram of the setup, and no need for the raw data in tables.