

Prelab: Experiment #7 – Resonance on a String

Read Experiment #7 and find the equation used in your graph.

What will be plotted on the y-axis?

What will be plotted on the x-axis?

What is the algebraic expression for the slope?

What is the algebraic expression of the y-intercept?

The average internodal distance of a vibrating string is 22.1 ± 0.2 cm. Find the inverse wavelength $1/\lambda$ in SI units.

(2.262 ± 0.020)

A string has a linear density of $(5.20 \pm 0.02) \times 10^{-3}$ kg/m. Tension in the string is supplied by a hanging mass of 75.0 ± 0.5 g. The acceleration due to gravity is 9.81 ± 0.01 m/s².

Find the speed of a wave on this string.

(11.895 ± 0.069)

Note, you will not be allowed into the lab until you show that you have done the pre-lab and have properly prepared the introductory portion (Title, Goal, Theory Summary, and Uncertainty Derivations) of the lab in your notebook.

No extra lab time will be allowed for the time you miss because you are unprepared.