

Name: _____ Date of Lab: _____

I. Data: Enter your measured and computed quantities in this table.
Also, don't forget to upload your Excel document to Canvas!
Also, don't forget every week to include all 8 items from pages vi-vii in your lab notebook!

Quantity recorded	Value	Unit
Distance from vibrator to pulley	\pm	m
Hanging mass		kg
Slope of frequency vs. n graph	\pm	1/s
Linear density of string (μ)	$(9.38 \pm 0.43) \times 10^{-4}$	kg/m
Velocity ("dynamic", from slope)	\pm	m/s
Velocity ("static", from equation)	\pm	m/s

II. Questions

Stringed musical instruments, such as guitars and violins, use stretched strings with standing waves, either between the "bridge" and the "nut" or between a finger and the "bridge". The best answers will be based on interpretations of equation (4) with equation (5) in the lab manual.

1. Explain how tightening or loosening strings can be used to tune them.
2. Explain why the strings for the lower notes are thicker or heavier than those for higher notes.
3. Explain why pressing a finger onto a string results in a higher pitch.