Standing Waves on a String Worksheet

revised April 15, 2004

Your Name: _____ **Signature:** _____

Lab partner(s): _____

Course & Section: _____ **Station #** _____ **Date:** _____

String mass M_{string} = _____ ± _____ _____

String length L = _____ ± _____ _____

Discussion of reasoning for appropriate length for finding μ and measurement techniques:

Linear density μ = _____ ± _____ _____

Mass of hanging mass M_{mass}= _____ _____ (we can assume negligible uncertainty)

Enter into the table on the reverse side of this worksheet the frequencies, periods and wavelengths of each arrangement of standing waves that you observe. Include uncertainties.

Measured velocity of wave propagation V_M = _____±_____ _____

Predicted value V_P = _____ ± _____ _____

Compare your measured and predicted values of the wave velocity. Comment on their consistency. Justify your conclusions.

Attach a printout of your *Origin* graph and linear fit, with fit parameters.

Number of Loops n	Frequency f (Hz)	Period T(s)	Length D of n loops	Wavelength λ (m)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

GRADE:_____ (out of 15 points)

GRADED BY _____ (TA's initials)